

## Seychelles Annex I. Extended bibliography

The list below is a Word-readable export of the Literature database developed for the Seychelles in Endnote. File attachments are not included due to copyright concerns, but they can be requested from the National Data and Information Coordinator.

**Reference Type:** Journal Article

**Record Number:** 178

**Author:** D. H. Cuching

**Year:** 1973

**Reference Type:** Journal Article

**Record Number:** 198

**Author:** S. Jennings, S. Marshall and N. Polunin

**Year:** 1996

**Title:** Seychelles' marine protected areas: comparative structure and status of reef fish communities

**Journal:** Biological Conservation

**Volume:** 75

**Issue:** 3

**Pages:** 201-209

**Short Title:** Seychelles' marine protected areas: comparative structure and status of reef fish communities

**Reference Type:** Journal Article

**Record Number:** 23

**Author:** R. S. K. Barnes, Smith, D.J., Barnes, D.K.A., Gerlach, J.

**Year:** 2008

**Title:** Variation in the distribution of supralittoral vegetation around an atoll cay: Desroches (Amirantes Islands, Seychelles).

**Journal:** Atoll Research Bulletin

**Volume:** 565

**Date:** Nov 2008

**Short Title:** Variation in the distribution of supralittoral vegetation around an atoll cay: Desroches (Amirantes Islands, Seychelles).

**Keywords:** Seychelles; benthic habitat; coastal habitat; special management; 3; Helena Francourt; littoral, Flora, coralline, coastal plants

**Abstract:** The shores of the small coral cay on Desroches Atoll (Amirante Islands, Seychelles) span a range of conditions from relatively sheltered (along the atoll lagoonal coast) to very exposed (facing the Indian Ocean). This appears in no way to affect the occurrence of *Scaevola*, which dominates the entire coastline, but the frequencies of the other

characteristic but less widespread shoreline plant species (Casuarina, Cocos, Guettarda, Suriana and Heliotropium) show significant variation around the cay perimeter.

**Notes:** 1011

**Reference Type:** Journal Article

**Record Number:** 161

**Author:** R. S. K. Barnes

**Year:** 2010

**Title:** Regional and latitudinal variation in the diversity, dominance and abundance of microphagous microgastropods and other benthos in intertidal beds of dwarf eelgrass, *Nanozostera* spp.

**Journal:** Marine Biodiversity

**Short Title:** Regional and latitudinal variation in the diversity, dominance and abundance of microphagous microgastropods and other benthos in intertidal beds of dwarf eelgrass, *Nanozostera* spp.

**DOI:** 10.1007/s12526-010-0036-1

**Keywords:** Seychelles; WIO; ex-WIO; benthic habitat; coastal protected areas; special management; 3; Helena Francourt; Gastropoda; Latitudinal gradients; Littoral ecology; Seagrass; Zoobenthos

**Abstract:** The smaller macroscopic members of the epifauna and shallowly-burrowing infauna of comparable intertidal beds of dwarf eelgrass and associated areas of non-vegetated sediment were investigated with uniform methodology in the cool-temperate English southern North Sea (*Nanozostera noltii*), warm-temperate southern coast of the Western Cape, South Africa (*N. capensis*) and in subtropical southern Queensland, Australia (*N. muelleri capricorni*), together with equivalent seagrass sites in tropical Sulawesi, Indonesia, and Seychelles, Western Indian Ocean. Epifaunal microphagous microgastropods dominated both the eelgrass and non-vegetated cool- and warm-temperate sites with >80% of macrofaunal individuals, but decreased markedly in density and dominance with decreasing latitude, down to near zero in the tropics; microgastropod species diversity in the *Nanozostera* increased with decreasing latitude, whilst their species richness per core sample was highest in the warm temperate zone. Other co-existing—largely infaunal—taxa (mainly annelid worms, bivalve molluscs and crabs), however, showed less marked latitudinal variation in density and no relationship of taxon diversity with latitude. With few exceptional cases, microgastropod density, dominance, species richness and diversity were greater in the eelgrass beds than in adjacent non-vegetated sediments, as were the

densities and taxon diversities of the associated faunal groups, although within the beds themselves there were no significant correlations between seagrass density and the density or diversity of either the microgastropods or their associated fauna. The extent to which the presence or absence of seagrass influenced the underlying community composition of the benthic fauna varied between localities. These results are consonant with an increasing effect of predation in low latitudes on small epifauna.

**Notes:** 1012

**Reference Type:** Report

**Record Number:** 9

**Author:** K. Beaver

**Title:** Seychelles Marine Ecosystem Management Project. (GEF / SEYMEMP). Final Report

**Series Title:** GEF/SEYMEMP

**Pages:** 108

**Short Title:** Seychelles Marine Ecosystem Management Project. (GEF / SEYMEMP). Final Report

**Keywords:** Corals, coral reefs, Changes, marine ecosystems

**Notes:** 1013

**Reference Type:** Report

**Record Number:** 39

**Author:** R. A. Payet, Soogun, N., Ranaivoson, E., Payet, R.J., Ali Abdallah, F.

**Year:** 2004

**Title:** GIWA Regional assessment 45b: Indian Ocean Islands

**Series Editor:** UNEP

**Series Title:** Global International Waters Assessment

**Pages:** 100

**Publisher:** U. N. E. Programme

**Short Title:** GIWA Regional assessment 45b: Indian Ocean Islands

**Keywords:** Seychelles; WIO; Admin-Sea; Legislation; Continental shelf; international bodies; MCS; 4: Helena Francourt

**Abstract:** General Info on Seychelles is included; climate, weather, coastline size etc..

**Notes:** 7005

**Reference Type:** Report

**Record Number:** 64

**Author:** A. Abdulla, Bijoux, J., Engelhardt, U., Obura, D., Payet, R., Pike, K., Robinson, J., Russell, M., Skewes, T.

**Year:** 2005

**Title:** Status of the coral reefs of the Seychelles after the December 2004 tsunami.  
**Series Title:** Status of coral reefs in tsunami affected countries:2005  
**Pages:** 125-133  
**Short Title:** Status of the coral reefs of the Seychelles after the December 2004 tsunami.  
**Keywords:** Seychelles; benthic habitat; coastal protected areas; 4; Helena Francourt; Coral, Tsunami  
**Notes:** 10001

**Reference Type:** Report  
**Record Number:** 114  
**Author:** A. Abdulla  
**Year:** 2006, August 10  
**Title:** Marine Introduced species: Towards better detection and Management in the Seychelles. Draft Report.  
**Series Title:** IUCN Marine Programme  
**City:** Seychelles  
**Pages:** 31  
**Short Title:** Marine Introduced species: Towards better detection and Management in the Seychelles. Draft Report.  
**Keywords:** Seychelles; coastal habitat; exotics; inshore; coastal protected areas; ports and coastal transport systems; coastal plans; special management; 5;Helena Francourt; Invasive species, marine, introduced, alien, invasive  
**Notes:** 10002

**Reference Type:** Report  
**Record Number:** 26  
**Author:** A. Abdulla, Floerl, O., Richmond, M., Johnston, O., Bertzky, M., Birch, S., Walsh, A.  
**Year:** 2007  
**Title:** Enhanced Detection and Management of Marine Introduced Species in the Seychelles.  
**Series Title:** IUCN Global Marine Program.  
**Institution:** IUCN  
**Volume:** Final Project Report  
**Pages:** 125  
**Short Title:** Enhanced Detection and Management of Marine Introduced Species in the Seychelles.  
**Keywords:** Seychelles; coastal habitat; exotics; inshore; coastal protected areas; ports and coastal transport systems; coastal plans; special management; 5;Helena Francourt; Invasive species, marine, introduced, alien, invasive  
**Notes:** 10003  
**URL:** [www.iucn.org](http://www.iucn.org).

**Reference Type:** Report

**Record Number:** 113

**Author:** A. Abdulla

**Year:** 2005 December

**Title:** Detecting marine introduced species in Seychelles.

**Series Editor:** I. G. M. Programme

**Series Title:** Progress Report

**Institution:** IUCN Global Marine Programme

**Pages:** 13

**Short Title:** Detecting marine introduced species in Seychelles.

**Keywords:** Seychelles; coastal habitat; exotics; inshore; coastal protected areas; ports and coastal transport systems; coastal plans; special management; 5; Helena Francourt; Invasive species, marine, introduced, alien, invasive

**Abstract:** The spread of non- indigenous marine species has become a global environmental issue due

to a rapid increase in commercial shipping and recreational boating, activities that may introduce these species to non-native ecosystems. Marine invasive species are currently recognized as one of the most significant threats to global biodiversity. The damage caused by invasive species can be devastating due to competition with indigenous species, alteration of ecosystem dynamics, and reduction of the complexity and resilience of the local ecosystem. Invasive species are more likely to become established in disturbed or degraded habitats and may compound the consequences of anthropogenic impacts such as over- harvest or physical damage. Research and monitoring efforts are essential to provide early detection and warning of the arrival of introduced species and to equip managers with a better understanding of the impacts of introduced species on coral reef ecosystems. This understanding must be complemented with on-site action plans for managers to stem the introduction and expansion of introduced species on coral reefs and related ecosystems.

**Notes:** 10004

**Reference Type:** Report

**Record Number:** 79

**Author:** P. A. Adam, Bijoux, R., Gendron, G., Rosine, G.

**Year:** 2006

**Title:** Coral Reef Assessment; Silhouette (SE Reef)

**Series Title:** Unpublished report (EIA)

**Pages:** 21

**Short Title:** Coral Reef Assessment; Silhouette (SE Reef)

**Keywords:** Seychelles; benthic habitat; coastal protected areas; special management; 1; Helena Francourt; EIA; Silhouette

**Abstract:** The construction of the new hotel on Silhouette Island requires the construction of treatment plants which outfall will be on the coastal area near the main jetty (La Passe). This

will surely have an adverse impact on the surrounding marine environment. In response, as part of the EIA process the Marine Unit was given the task of surveying the marine life of this area. More precisely, to locate an appropriate position for laying the pipeline and assess the possible impacts of the outfall (brine) on the surrounding marine life and propose ways of minimising this impact.

**Notes:** 10005

**Reference Type:** Report

**Record Number:** 32

**Author:** S. Ahamada, Bijoux, J., Bigot, L., Cauvin, B., Koonjul, M., Maharavo, J., Meunier, S., Moine-Picard, M., Quod, J., Pierre-Louis, R.

**Year:** 2004

**Title:** Status of the coral reefs of the South West Indian Ocean Island States.

**Series Editor:** C. Wilkinson

**Series Title:** Status of coral reefs of the world.

**City:** Townsville

**Institution:** Australian Institute of Marine Science

**Pages:** 71-87

**Date:** 2004

**Short Title:** Status of the coral reefs of the South West Indian Ocean Island States.

**Keywords:** seychelles;Benthic habitat; invertebrates; fish, coastal protected areas; special management; coastal plans; 5; Helena Francourt; Coral bleaching; coral

**Abstract:** Some coral reefs of the countries of the South Western Indian Ocean are showing recovery from the coral bleaching event of 1998 that reduced live hard coral cover on many reefs to less than 5%. However, recent bleaching events and subsequent mortality of the new recruits are impeding this recovery. Some exceptional sites are proving to be highly resilient to the bleaching damage, while at other sites, anthropogenic stresses including excessive sedimentation, pollution and trampling are compounding the effects of natural disturbances, such as cyclones, and increasing reef degradation. There is considerable effort to increase the capacity to manage and to improve decision making. It is encouraging that certain states are reporting increased resistance of Acropora to coral bleaching, as these coral species are critical for much of the 3-dimensional structure of reefs, and for creating complex habitats for fish and other reef species. The region is described as a biodiversity 'hot spot', with a large number of endemic species. The number of monitoring sites in the region has continued to increase, with the inclusion of some less accessible sites, such as Tromelin, Juan da Nova, Europa (France) and Cosmoledo, Assumption and Aldabra (Seychelles). These sites have been surveyed within the last 2 years to improve the knowledge of the status of the coral reefs of this region over a larger geographical range. Socio-economic evaluation of coral reef resources has been carried out in some states within

the last 2 years. The management of MPAs is being strengthened to increase the effectiveness of conservation in the face of a predicted increase in frequency of coral-bleaching events.

**Notes:** 10006

**Reference Type:** Book Section

**Record Number:** 44

**Author:** S. B. Ahmada, L., Bijoux, J., Maharavo, J., Meunier, S., Moyne-Picard, M., Paupiah, N.

**Year:** 2002

**Title:** Status of coral reefs in the South West Indian Ocean Island Node: Comoros, Madagascar, Mauritius, Reunion and Seychelles.

**Editor:** C. Wilkinson

**Book Title:** Status of coral reefs of the world.

**Publisher:** CORDIO

**Pages:** 79-100

**Chapter:** 5

**Short Title:** Status of coral reefs in the South West Indian Ocean Island Node: Comoros, Madagascar, Mauritius, Reunion and Seychelles.

**Keywords:** seychelles;Benthic habitat; invertebrates; fish, coastal protected areas; special management; coastal plans; 5; Helena Francourt; Coral bleaching; coral

**Abstract:** A regional monitoring network of the GCRMN was formed just after the major coral bleaching event in 1998. The goal was to assist the Comoros, Madagascar, Mauritius, Reunion and Seychelles manage their reef resources within the Regional Environment Programme of the Indian Ocean Commission. The Node is now being financed for 3 years by the Global Environment Facility (GEF and World Bank) and the European Union to continue coral reef monitoring to strengthen the capacity of national networks to provide data and advice for resource management. The extent of monitoring has increased from 43 stations in 1999/2000 to more than 70 stations in 2002, with more than 20 stations in Marine Protected Areas (MPAs). The trend on Comoros is for considerable coral regeneration following the 1998 bleaching. The recovery in the Moheli MPA is greater than in Grande Comoros, where regeneration and coral growth is slow. There is an urgent need for rational management of fishing, extraction of materials, and urbanisation on the coasts. In Madagascar, there are signs of damage on reef flats near human activities (North West, South East, East coast), whereas isolated reef slopes are in better condition. Reefs in Mauritius continue to be relatively stable, although domestic and agricultural pollution at some sites continues to degrade the coral reefs. While the damage is not alarming, the authorities should implement management to control damaging activities. Six new sites were added in 2002 on Rodrigues using GCRMN recommended methods. Coral communities on the fringing reefs have a healthy cover of hard coral, although species diversity is not high. The principal trends over 4 years on La Reunion are for relative stability of coral cover and fish populations in the Saint-Leu and Saint Gilles sectors. Corals on the inner granite islands of the Seychelles remain severely degraded since the 1998 bleaching event, however, there has been a slight increase in coral cover and more

recruitment in the last 2 years. Coral bleaching and mortality in 1998 was most severe in the north (Seychelles and Comoros), whereas there was rapid recovery on Madagascar, Mauritius and Reunion, after less severe bleaching. There was localised bleaching in 2001 in Reunion, and in March 2002 on Rodrigues and Seychelles. The coral reef monitoring is fulfilling a need for the data as the foundation for Integrated Coastal Management.

**Notes:** 10006

**Reference Type:** Report

**Record Number:** 155

**Author:** A. Aish

**Year:** 2000/2001

**Title:** Tourism and stakeholder involvement of tourism operations in the management of the Marine Parks and Special Reserves of the Seychelles.

**Series Title:** MSM899: Research skills for Tropical Coastal Management.

**Institution:** University of Newcastle upon Tyne

**Pages:** 18

**Short Title:** Tourism and stakeholder involvement of tourism operations in the management of the Marine Parks and Special Reserves of the Seychelles.

**Keywords:** Seychelles; Coastal habitat; inshore; populations; coastal tourism; coastal protected areas; special management; 2; Helena Francourt; tourism; stakeholder

**Notes:** 10007

**Research Notes:** Hard copy available at SCMRT; last viewed on 02/12/2009

**Reference Type:** Journal Article

**Record Number:** 63

**Author:** B. Archer, Fletcher, J.

**Year:** 1996

**Title:** The economic impact of tourism in the Seychelles.

**Journal:** Annals of Tourism Research

**Volume:** 23

**Issue:** 1

**Pages:** 32-47

**Start Page:** 32

**Short Title:** The economic impact of tourism in the Seychelles.

**Keywords:** Seychelles; coastal habitat; populations; coastal tourism; 2; Helena Francourt; tourism expenditure; multipliers; input-output analysis; employment; impact, government.

**Abstract:** The paper describes the results of a detailed study to analyze the impact made by 1991 tourism expenditure on incomes, employment, public sector revenue and the balance of payments in the Seychelles. Details of the methodology and data sources are provided and the results and policy implications are analyzed. These tourism impacts, found to vary by visitors' countries of origin, provide useful policy and marketing implications, although this variation



was found to be related almost entirely to the different magnitudes of expenditure than to variations in the size of the multiplier by country of residence.

**Notes:** 10008

**Reference Type:** Report

**Record Number:** 123

**Author:** D. K. A. Barnes, Barnes, R.S.K.

**Year:** 2009 Jan

**Title:** Littoral Biodiversity in Curieuse Marine Park

**Series Title:** Preliminary report January 2009 fieldwork by EarthWatch-Mitsubishi team 2

**Short Title:** Littoral Biodiversity in Curieuse Marine Park

**Keywords:** Seychelles; invertebrates; benthic habitat; coastal protected areas; special management; 3; Helena Francourt; littoral, Curieuse

**Abstract:** Aim: To survey the mega- and larger macro-faunal biodiversity associated with the three main littoral habitats in Curieuse Marine Park, Seychelles. Also to collect littoral fauna datasets comparable with those collected previously at Mahe, Silhouette and Desroches islands as well as those elsewhere in the Indian Ocean.

**Notes:** 10009

**Reference Type:** Journal Article

**Record Number:** 97

**Author:** K. A. Barnes, Barnes, R.S.K., Smith, D.J., Rothery, P.

**Year:** 2009

**Title:** Littoral biodiversity across scales in the Seychelles, Indian Ocean

**Journal:** Mar Biodiv

**Short Title:** Littoral biodiversity across scales in the Seychelles, Indian Ocean

**DOI:** 10.1007/s12526-009-0010-y

**Keywords:** Seychelles; invertebrates; benthic habitat; coastal protected areas; special management; 3; Helena Francourt; Tropical richness . Intertidal . Mollusc . Gastropod . Echinoderm . Marine park

**Abstract:** The 16 Marine Protected Areas in the Seychelles Archipelago (Western Indian Ocean) are monitored by a wide range of scientific and conservation organizations, but these mainly focus on coral or fish. We have investigated variability in littoral biodiversity (with emphasis on molluscs, anomuran and brachyuran crustaceans, echinoderms and polyclad flatworms) across four spatial scales, including the largest, and previously unsurveyed, Silhouette Marine National Park. We recorded all fauna >4 mm within 1-m<sup>2</sup> quadrats replicated at three tidal heights across transects and sites on the central granitic islands of Mahé and Silhouette and the outer Desroches coral cay. We

sampled 438 quadrats and recorded 292 species of our study taxa, but accumulation curves did not reach asymptote. Most species were rare and encountered only once, although a few key species were highly abundant. Biodiversity was dominated by gastropod molluscs, which non-metric multidimensional scaling analyses showed to be a reasonable surrogate for overall faunal patterns. Nonmetric multidimensional scaling showed that the fauna of each island were quite dissimilar, and after island, site explained the most variance in our generalised linear mixed models. The two least rich sites were adjacent to the only established hotel on Desroches but we cannot establish causality due to lack of a-priori data. However major enlarging of a hotel adjacent to one site on Silhouette should enable future scrutiny of tourism influences.

**Notes:** 10010

**Reference Type:** Report

**Record Number:** 69

**Author:** J. Bijoux, Hagan, A., Engelhardt, U., Stoddart, B., Quatre, R., Etienne, M., Romain, D., Bonne, R.

**Year:** 2008

**Title:** Status of coral reefs of the Seychelles Islands, 2008.

**Series Title:** CD-ROM accompanying the Status of Coral Reefs of the World 2008.

**City:** Townsville, Australia.

**Institution:** Australian Institute of Marine Science.

**Pages:** 11

**Short Title:** Status of coral reefs of the Seychelles Islands, 2008.

**Keywords:** Seychelles; Benthic habitat; invertebrates; Coastal protected areas; special management; 5; Helena Francourt; coral reef; bleaching

**Notes:** 10014

**Reference Type:** Report

**Record Number:** 80

**Author:** J. P. Bijoux, Adam, P-A., Alcindor, R., Bristol, R., Decommarmond, A., Mortimer, J.A., Robinson, J., Rosine, G., Talma, E.S., Wendling, B., Zialor, V.

**Year:** 2003

**Title:** Marine Biodiversity of the Seychelles archipelago: The known and unknown.

**Series Title:** Census of Marine Life Programme in sub-Saharan Africa. Marine Biodiversity of the Seychelles

**Short Title:** Marine Biodiversity of the Seychelles archipelago: The known and unknown.

**Keywords:** Seychelles; Benthic habitat; invertebrates; fish; Coastal habitat; Coastal protected

areas; special management; 5; Helena Francourt; bleaching; endemics, corals, flora, algae, seagrass, mangroves, marine biodiversity.

**Notes:** 10015

**Reference Type:** Report

**Record Number:** 124

**Author:** J. P. Bijoux, Decomarmond, A., Aumeeruddy, R.

**Year:** 2008, May

**Title:** Status of the Marine Environment Report Seychelles

**Series Title:** UNEP-GEF WIO-LaB Project: Addressing Land Based Activities in the Western Indian Ocean

**Pages:** 92

**Publisher:** U. report

**Short Title:** Status of the Marine Environment Report Seychelles

**Keywords:** Seychelles; Benthic habitat; invertebrates; Coastal protected areas; special management; 5; Helena Francourt; coral reef

**Notes:** 10016

**Reference Type:** Journal Article

**Record Number:** 91

**Author:** K. Y. Bil', Kolmakov, P.V., Muscatine, L.

**Year:** 1992

**Title:** Chapter 13: Photosynthetic products of zooxanthellae of the reef-building corals *Stylophora pistillata* and *Seriatopora coliendrum* from different depths of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 377

**Pages:** 1-8

**Short Title:** Chapter 13: Photosynthetic products of zooxanthellae of the reef-building corals *Stylophora pistillata* and *Seriatopora coliendrum* from different depths of the Seychelles Islands.

**Keywords:** Seychelles; Benthic habitat; invertebrates; primary production; special management; 2; Helena Francourt; corals; Photosynthesis

**Abstract:** In the world ocean, there is a large group of symbiotic organisms substantially contributing to the

total primary productivity of tropical shelf ecosystems (Davies 1977, Porter 1980, Falkowski et al. 1984,

Sorokin 1986), in conjunction with macrophytic algae, seagrasses and phytoplankton. This group is the

reef-building corals - symbiotic organisms including the polyps of colonial Cnidaria with their endosymbiotic microalgal zooxanthellae. It is known that zooxanthellae provide photosynthetic products

not only to themselves but also for the host polyps (Land et al. 1975, Muscatine et al. 1981, Muscatine et

al. 1984, Falkowski et al. 1984, Sorokin 1986). However, there are few data in the literature as to the type of photosynthetic carbon metabolism in zooxanthellae and possible changes under the effects of various environmental factors. Only several reports characterizing the type of photosynthesis in endosymbionts are available. In particular, Benson et al. (1978) and Hofmann and Kremer (1981) argue that zooxanthellae fix CO<sub>2</sub> through the C<sub>3</sub> pathway, i.e., carbon photoassimilation occurs with the help of ribulose-1,5-bisphosphate carboxylase and the first stable assimilate is 3-phosphoglycerate. Other works (Ting 1976, Beardall et al. 1976, Trench and Fisher 1983, 51er and Trench 1986), on the contrary, showed that free-living dinoflagellates and coral zooxanthellae have high levels of phosphoenol-pyruvate carboxylase and malate dehydrogenase activity, and express the opinion that C<sub>4</sub> photosynthesis or mixed C<sub>3</sub>-C<sub>4</sub> pathways of photosynthesis are possibly present.

**Notes:** 10017

**Reference Type:** Book Section

**Record Number:** 145

**Author:** R. Bour

**Year:** 1984

**Title:** Taxonomy, history and geography of Seychelles land Tortoises and fresh-water turtles.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands.

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 281-308

**Chapter:** 17

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Taxonomy, history and geography of Seychelles land Tortoises and fresh-water turtles.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; freshwater; 1; Helena Francourt; turtles; Tortoise; taxonomy

**Notes:** 10018

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Book Section

**Record Number:** 136

**Author:** C. J. R. Braithwaite  
**Year:** 1984  
**Title:** Geology of the Seychelles  
**Editor:** D. R. Stoddart  
**Book Title:** Biogeography and ecology of the Seychelles Islands  
**Publisher:** Dr. W. Junk Publishers  
**Volume:** 55  
**Pages:** 17-38  
**Chapter:** 2  
**Series Editor:** H. J. Dumont  
**Series Title:** Monographie Biologicae  
**Short Title:** Geology of the Seychelles  
**ISBN:** 90-6193-107-X  
**Keywords:** Seychelles; Geo; coastal plans; 3; Helena Francourt  
**Notes:** 10019  
**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Book Section  
**Record Number:** 142  
**Author:** A. J. Bruce  
**Year:** 1984  
**Title:** Marine caridean shrimps of the Seychelles.  
**Editor:** D. R. Stoddart  
**Book Title:** Biogeography and ecology of the Seychelles Islands  
**Publisher:** Dr. W. Junk Publishers  
**Volume:** 55  
**Pages:** 141-170  
**Chapter:** 8  
**Series Editor:** H. J. Dumont  
**Series Title:** Monographie Biologicae  
**Short Title:** Marine caridean shrimps of the Seychelles.  
**ISBN:** 90-6193-107-X  
**Keywords:** Seychelles; invertebrates; continental shelf; 2; Helena Francourt  
**Notes:** 10020  
**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Report  
**Record Number:** 132  
**Author:** W. J. Burnette, Robinson, J., Callow, M.  
**Year:** 2001  
**Title:** Increasing recruitment rate and diversity of scleractinian corals on four Seychelles reefs

three years after the 1997-98 global bleaching event.

**Series Title:** Shoals Publication No. P004

**Institution:** Shoals of Capricorn Programme.

**Publisher:** C. C. R. Unit

**Short Title:** Increasing recruitment rate and diversity of scleractinian corals on four Seychelles reefs three years after the 1997-98 global bleaching event.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt

**Notes:** 10021

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009).

**Language:** English

**Reference Type:** Report

**Record Number:** 42

**Author:** M. Callow, Quilindo, E., Liljevik, A., Stobart, B., Buckley, R.

**Year:** Oct 2001

**Title:** The status of regular sea urchins (Echinoidea) at Aldabra Atoll, Republic of Seychelles.

**Series Title:** Aldabra Marine Programme. Phase II. February 5th-26th 2001.

**Pages:** 28

**Short Title:** The status of regular sea urchins (Echinoidea) at Aldabra Atoll, Republic of Seychelles.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt

**Notes:** 10022

**Reference Type:** Report

**Record Number:** 12

**Author:** H. Cesar, Beukering, P., Payet, R., grandcourt, E.

**Year:** 2004

**Title:** Evaluation of the Socio-economic Impacts of Marine Ecosystem Degradation in the Seychelles

**Series Title:** GEF/SEYMEMP

**Pages:** 96

**Short Title:** Evaluation of the Socio-economic Impacts of Marine Ecosystem Degradation in the Seychelles

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; coastal tourism; 3; Helena Francourt

**Notes:** 10023

**Reference Type:** Journal Article

**Record Number:** 46

**Author:** G. Chelazzi

**Year:** 1982

**Title:** Behavioural adaptation of the gastropod *Nerita polita* L. on different shores at Aldabra atoll.

**Journal:** Proceedings of the Royal Society of London. Series B, Biological Sciences.

**Volume:** 215

**Issue:** 1201

**Pages:** 451-467

**Start Page:** 451

**Short Title:** Behavioural adaptation of the gastropod *Nerita polita* L. on different shores at Aldabra atoll.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 2; Helena Francourt

**Abstract:** On different shores of Aldabra atoll, Indian Ocean, the intertidal gastropod *Nerita polita* L. is most active during nocturnal low tide and digs into the sand during high tide and diurnal low tide. Nevertheless, the species shows a plasticity in both temporal (exploitation of the emersion time during nocturnal low tide) and spatial (short-term movements) components of its activity. The study showed that snails inhabiting different shores are behaviourally adapted to the actual morphology of the coast and its exposure to wave action.

**Notes:** 10024

**Reference Type:** Book Section

**Record Number:** 139

**Author:** A. M. Clark

**Year:** 1984

**Title:** Echinodermata of the Seychelles.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 83-102

**Chapter:** 5

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Echinodermata of the Seychelles.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt

**Notes:** 10025

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Report

**Record Number:** 131

**Author:** J. Collier, Humber, S., Jephcoat, A., et al.,

**Year:** 2001, Feb.

**Title:** Assessment of reef degradation following the 1998 coral bleaching event in the inner granitic islands of the Seychelles Islands by time-lapse side-scan sonar mapping.

**Series Title:** Shoals Publication No. R024

**Institution:** Shoals of Capricorn Programme

**Publisher:** C. C. R. Unit

**Short Title:** Assessment of reef degradation following the 1998 coral bleaching event in the inner granitic islands of the Seychelles Islands by time-lapse side-scan sonar mapping.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation.

**Notes:** 10026

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Journal Article

**Record Number:** 92

**Author:** P. Dustan

**Year:** 1992

**Title:** Chapter 14: Estimates of Indian Ocean productivity using natural fluorescence.

**Journal:** Atoll Research Bulletin

**Volume:** 378

**Pages:** 1-29

**Short Title:** Chapter 14: Estimates of Indian Ocean productivity using natural fluorescence.

**Keywords:** Seychelles; WIO; Primary production; currents; Continental shelf; 3; Helena Francourt; phytoplankton; fluorescence; upwelling

**Abstract:** Measurements of the vertical distribution of phytoplankton natural fluorescence in the equatorial Indian Ocean produced estimates of oceanic productivity ranging from 70 to 150 mg C-m<sup>-1</sup>.day<sup>-1</sup>. Vertical profiles of the water column revealed the presence of a distinct chlorophyll maximum which forms at or near the top of the thermocline at almost every station. Localized upwelling was observed in the vicinity of atolls which appears to be responsible for an island mass effect that may add to downstream oceanic productivity. There were no significant differences along an east and northward oceanic transect from 63° 20' E to 88° 56' E longitude. The estimates agree with previously reported production estimates for the Indian Ocean reinforcing the image of low and variable rates of production throughout the deep oceanic basin punctuated by localized island-induced upwellings.

**Notes:** 10027



**Reference Type:** Report

**Record Number:** 16

**Author:** U. Engelhardt

**Year:** 2002

**Title:** Ecological characteristics of scleractinian hard coral communities 4 years after the 1998 mass coral bleaching event.

**Series Title:** Seychelles Marine Ecosystem Management Project (SEYMEMP) - Coral Reef Study

**Series Volume:** Interim report number 2

**Pages:** 65

**Publisher:** R. International

**Short Title:** Ecological characteristics of scleractinian hard coral communities 4 years after the 1998 mass coral bleaching event.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation; scleractinia

**Abstract:** In recent years, coral reefs around the inner granitic islands of the Seychelles have suffered widespread hard coral mortality as a result of a variety of ecological impacts of both natural and anthropogenic origin. In early 1998, the most widespread and severe mass coral bleaching event on record as well as previously active outbreaks of crown-of-thorns starfish (*Acanthaster planci*) combined to cause severe system-wide degradation that has affected virtually all of the islands' coral reefs. This report summarises the results of intensive benthic surveys conducted across 40 individual reef sites located throughout the inner granitic islands of the Seychelles in January and February 2002.

**Notes:** 10028

**Reference Type:** Report

**Record Number:** 17

**Author:** U. Engelhardt

**Year:** 2002

**Title:** Ecological characteristics of scleractinian hard coral communities 4 years after the 1998 mass coral bleaching event.

**Series Title:** Seychelles Marine Ecosystem Management Project (SEYMEMP) - Coral Reef Study

**Series Volume:** Interim report number 3

**Pages:** 79

**Publisher:** R. International

**Short Title:** Ecological characteristics of scleractinian hard coral communities 4 years after the 1998 mass coral bleaching event.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation; scleractinia

**Notes:** 10029

**Reference Type:** Report

**Record Number:** 18

**Author:** U. Engelhardt

**Year:** 2003

**Title:** Diversity and recruitment characteristics of scleractinian hard coral communities 5 years after the 1998 mass coral bleaching event.

**Series Title:** Seychelles Marine Ecosystem Management Project (SEYMEMP) - Coral Reef Study

**Series Volume:** Interim report number 4

**Pages:** 71

**Publisher:** R. International

**Date:** July 2003

**Short Title:** Diversity and recruitment characteristics of scleractinian hard coral communities 5 years after the 1998 mass coral bleaching event.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation.

**Notes:** 10030

**Reference Type:** Report

**Record Number:** 11

**Author:** U. Engelhardt

**Year:** 2004

**Title:** The status of scleractinian coral and reef associated fish communities 6 years after the 1998 mass coral bleaching event.

**Series Title:** Seychelles Marine Ecosystem Management Project (SEYMEMP) - Coral Reef Study

**Institution:** Reefcare International

**Short Title:** The status of scleractinian coral and reef associated fish communities 6 years after the 1998 mass coral bleaching event.

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation.

**Notes:** 10031

**Reference Type:** Report

**Record Number:** 14

**Author:** U. Engelhardt

**Year:** 2004

**Title:** Seychelles Integrated Marine Protected Area System Plan (IMPASP)

**Series Title:** Seychelles Marine Ecosystem Management Project (SEYMEMP)

**Publisher:** R. I. P. Ltd

**Date:** Feb 2004

**Short Title:** Seychelles Integrated Marine Protected Area System Plan (IMPASP)

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation; corals

**Notes:** 10032

**Reference Type:** Journal Article

**Record Number:** 115

**Author:** C. J. Feare, Gill, E.L., Carty, P., Carty, H.E., Ayrton, V.J.

**Year:** 1997

**Title:** Habitat use by Seychelles Sooty Terns *Sterna fuscata* and implications for colony management.

**Journal:** Biological Conservation

**Pages:** 69-76

**Short Title:** Habitat use by Seychelles Sooty Terns *Sterna fuscata* and implications for colony management.

**Keywords:** Seychelles; birds; 5; Helena Francourt; sooty tern, *Sterna fuscata*, habitat use, habitat management, sustainable exploitation.

**Abstract:** The relationship between sooty tern *Sterna fuscata* nest densities and vegetation characteristics of the breeding colonies was investigated on four islands in the Seychelles. Nest densities were greatest in areas with a vegetation cover of 30-50%, and areas that provided these conditions were generally dominated by pourpier *Portulaca oleracea*. On Aride Island, sooty terns nested at low density under an enclosed tree canopy but on the other islands nests were generally in the open, among sparse vegetation. On Desnoeufs Island, where eggs are harvested commercially for human consumption, sooty terns avoided nesting in dense areas of epi bleu *Stachytarpheta jamaicensis*, an introduced plant whose success on the island may be related to egg exploitation. Management of colony vegetation, especially the control of introduced aggressive species, and the encouragement of optimum conditions for nesting, could increase the numbers of nesting sooty terns and their reproductive output, helping to buffer them against adverse effects of human activity. Appropriate protection of sooty tern colonies can also benefit rarer and more vulnerable seabirds and turtles that share nesting islands.

**Notes:** 10033

**Reference Type:** Journal Article

**Record Number:** 48

**Author:** C. J. Feare, Doherty, P.F.

**Year:** 2004

**Title:** Survival estimates of adult Sooty Terns *Sterna fuscata* from Bird Island, Seychelles.

**Journal:** Ibis

**Volume:** 146

**Pages:** 475-480

**Start Page:** 475

**Short Title:** Survival estimates of adult Sooty Terns *Sterna fuscata* from Bird Island, Seychelles.

**Keywords:** Seychelles; birds; 5; Helena Francourt; sooty tern, *Sterna fuscata*, survival; bird island; sustainable management.

**Abstract:** Sooty Tern *Sterna fuscata* populations on the Seychelles Islands have been exploited for

human consumption of their eggs for at least the last 75 years. This has led to concern about possible declines in these populations. To address these concerns, the Seychelles Government has instituted a research and management plan to ensure the sustainability of the egg harvest. The harvest model, upon which current harvest regulations are based, was constructed with an assumed adult survival rate because there are no published Sooty Tern survival rate estimates. We fill this knowledge gap and address this assumption. We estimated adult Sooty Tern survival to be 0.91 (SE = 0.01), which was close to the estimate used in the model. This estimate is also comparable with other seabird survival estimates. In the future this estimate could be improved with higher recapture rates. In addition, further advances in models for estimating probabilities of age at first breeding, prebreeder survival and population growth should be used to best effect, by making appropriate improvements to the ring search protocol, to provide further feedback to the management programme.

**Notes:** 10034

**Reference Type:** Journal Article

**Record Number:** 52

**Author:** J. Frazier

**Year:** 2006

**Title:** A Neotype for the Aldabra Tortoise, *Testudo gigantea* Schweigger, 1812

**Journal:** Herpetological Review

**Volume:** 37

**Issue:** 3

**Pages:** 275-280

**Start Page:** 275

**Short Title:** A Neotype for the Aldabra Tortoise, *Testudo gigantea* Schweigger, 1812

**Keywords:** Seychelles; reptiles; 2; Helena Francourt; giant Tortoises, Aldabra

**Notes:** 10035

**Reference Type:** Book Section

**Record Number:** 140

**Author:** J. S. Garth

**Year:** 1984

**Title:** Brachyuran decapod crustaceans of coral reef communities of the Seychelles and Amirante Islands.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 103-122

**Chapter:** 6

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Brachyuran decapod crustaceans of coral reef communities of the Seychelles and Amirante Islands.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; Benthic habitat; invertebrates; coastal habitat; Coastal protected areas; 3; Helena Francourt; coral bleaching; degradation; corals

**Notes:** 10036

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Journal Article

**Record Number:** 27

**Author:** J. Gerlach

**Year:** 2008

**Title:** Fragmentation and Demography as Causes of Population Decline in Seychelles Freshwater Turtles (Genus *Pelusios*)

**Journal:** Chelonian Conservation and Biology

**Volume:** 7

**Issue:** 1

**Pages:** 78-87

**Start Page:** 78

**Short Title:** Fragmentation and Demography as Causes of Population Decline in Seychelles Freshwater Turtles (Genus *Pelusios*)

**Keywords:** Seychelles; freshwater; 1; Helena Francourt; turtles; Tortoise; taxonomy; Reptilia; Testudines; Pelomedusidae; *Pelusios*; turtle; conservation; habitat loss; Seychelles; bleaching; photosynthesis; coral community structure; refuge

**Abstract:** In the Seychelles islands, all 3 endemic freshwater turtle taxa are either extinct (*Pelusios seychellensis*) or critically endangered (*Pelusios castanoides intergularis* and *Pelusios subniger parietalis*). These turtles are threatened by habitat loss, and monitoring of populations since 1996 has identified significant ongoing population declines. Drainage of wetland sites has reduced the number of populations, but even surviving sites are mostly reduced in area and quality. Only 5 *Pelusios subniger parietalis* and 3 *Pelusios castanoides intergularis* populations showed evidence of reproduction within the last 10 years. Longevity records suggest that *Pelusios*

species may live for at least 40 years, and captive breeding data indicate that sexual maturity

may

be comparatively early in these taxa (ca. 2 years). Populations can persist for decades after reproduction has ceased, resulting in effective population extinction, even when environmental conditions stabilized. This is a characteristic that is shared with other long-lived species, and demography should be an essential component of recovery plans for any such species.

Conversely,

improvement in habitat may allow rapid population recovery, as has been demonstrated in *Pelusios subniger parietalis* on Fregate Island.

**Notes:** 10038

**Reference Type:** Journal Article

**Record Number:** 160

**Author:** J. Gerlach

**Year:** 2008

**Title:** Setting conservation priorities- a Key Biodiversity Areas Analysis for the Seychelles Islands.

**Journal:** The Open Conservation Biology Journal

**Volume:** 2

**Pages:** 44-53

**Short Title:** Setting conservation priorities- a Key Biodiversity Areas Analysis for the Seychelles Islands.

**Keywords:** Seychelles; birds; coastal protected areas; 2; Helena Francourt; key biodiversity area; KBA; biodiversity

**Abstract:** Key Biodiversity Areas (KBAs) are areas identified as being important for the conservation of biodiversity due

to the presence of threatened species or habitats, or particularly high levels of biodiversity.

They are a useful concept for setting site conservation priorities, combining other categories

such as biodiversity hotspots, Important Bird Areas and 'ecoregions'. An analysis of the

terrestrial KBAs of the Seychelles islands based on comprehensive biodiversity assessments

identifies 48 sites of conservation importance. A high proportion of the land area of Seychelles

is designated as protected areas, however, the KBA analysis indicates that this needs to be

expanded by a further 47km<sup>2</sup>. The KBAs are threatened by development (6 sites), sea-level rise

(13 sites) and unpredictable climate change (16 sites). Habitat degradation caused by invasive

species is the most significant threat to the largest number of KBAs, affecting all 48 sites with

invasive species dominating the plant communities in 15 sites. There is an urgent requirement

for future conservation in Seychelles to combine effective legal protection of KBAs with

large-scale habitat restoration.

**Notes:** 10039

**Reference Type:** Journal Article

**Record Number:** 2

**Author:** N. A. J. Graham, Wilson, S.K., Jennings, S., Polunin, N.V.C., Bijoux, J.P., Robinson, J.

**Year:** 2006

**Title:** Dynamic fragility of oceanic coral reef ecosystems.

**Journal:** Proceedings of the National Academy of Science

**Volume:** 103

**Issue:** 22

**Pages:** 8425-8429

**Start Page:** 8425

**Epub Date:** May 30, 2006

**Type of Article:** Scientific paper

**Short Title:** Dynamic fragility of oceanic coral reef ecosystems.

**Keywords:** Seychelles; benthic habitat; fish; invertebrates; climate change; coastal protected areas; special management; 5; Helena Francourt; biodiversity, coral bleaching, resilience.

**Abstract:** As one of the most diverse and productive ecosystems known, and one of the first ecosystems to exhibit major climate-warming impacts (coral bleaching), coral reefs have drawn much scientific attention to what may prove to be their Achilles heel, the thermal sensitivity of reef-building corals. Here we show that climate change-driven loss of live coral, and ultimately structural complexity, in the Seychelles results in local extinctions, substantial reductions in species richness, reduced taxonomic distinctness, and a loss of species within key functional groups of reef fish. The importance of deteriorating physical structure to these patterns demonstrates the longer-term impacts of bleaching on reefs and raises questions over the potential for recovery. We suggest that isolated reef systems may be more susceptible to climate change, despite escaping many of the stressors impacting continental reefs.

**Notes:** 10040

**Language:** English

**Reference Type:** Journal Article

**Record Number:** 1

**Author:** N. A. J. Graham, Wilson, S.K., Jennings, S., Polunin, N.V.C., Robinson, J., Bijoux, J.P., Daw, T.M.

**Year:** 2007

**Title:** Lag Effects in the Impacts of Mass Coral Bleaching on Coral Reef Fish, Fisheries, and Ecosystems.

**Journal:** Conservation Biology

**Volume:** 21

**Issue:** 5

**Pages:** 1291-1300

**Start Page:** 1291

**Type of Article:** Scientific paper

**Short Title:** Lag Effects in the Impacts of Mass Coral Bleaching on Coral Reef Fish, Fisheries, and Ecosystems.

**Keywords:** Seychelles; benthic habitat; fish; invertebrates; climate change; coastal protected

areas; special management; 5; Helena Francourt; climate change; coral bleaching; coral reef ecosystems; coral reef fishes; coral reef resilience; marine protected areas; size spectra analysis.

**Abstract:** Recent episodes of coral bleaching have led to wide-scale loss of reef corals and raised concerns over the effectiveness of existing conservation and management efforts. The 1998 bleaching event was most severe in the western Indian Ocean, where coral declined by up to 90% in some locations. Using fisheries-independent data, we assessed the long-term impacts of this event on fishery target species in the Seychelles, the overall size structure of the fish assemblage, and the effectiveness of two marine protected areas (MPAs) in protecting fish communities. The biomass of fished species above the size retained in fish traps changed little between 1994 and 2005, indicating no current effect on fishery yields. Biomass remained higher in MPAs, indicating they were effective in protecting fish stocks. Nevertheless, the size structure of the fish communities, as described with size-spectra analysis, changed in both fished areas and MPAs, with a decline in smaller fish (<30 cm) and an increase in larger fish (>45 cm). We believe this represents a time-lag response to a reduction in reef structural complexity brought about because fishes are being lost through natural mortality and fishing, and are not being replaced by juveniles. This effect is expected to be greater in terms of fisheries productivity and, because congruent patterns are observed for herbivores, suggests that MPAs do not offer coral reefs long-term resilience to bleaching events. Corallivores and planktivores declined strikingly in abundance, particularly in MPAs, and this decline was associated with a similar pattern of decline in their preferred corals. We suggest that climate-mediated disturbances, such as coral bleaching, be at the fore of conservation planning for coral reefs.

**Notes:** 10041

**Language:** English

**Reference Type:** Journal Article

**Record Number:** 74

**Author:** E. Grandcourt

**Year:** 2005

**Title:** Demographic characteristics of selected Epinepheline Groupers (Family: Serranidae;



Subfamily: Epinephelinae) from Aldabra Atoll, Seychelles.

**Journal:** Atoll Research Bulletin

**Volume:** 539

**Pages:** 201-216

**Short Title:** Demographic characteristics of selected Epinepheline Groupers (Family: Serranidae; Subfamily: Epinephelinae) from Aldabra Atoll, Seychelles.

**Keywords:** Seychelles; benthic habitat; fish; inshore fisheries; coastal protected areas; special management; 3; Helena Francourt

**Abstract:** Sagittal otoliths were extracted from samples of six species of groupers (Serranidae: Epinephelinae) caught with hand lines around the periphery of Aldabra atoll (southwest Indian Ocean) in December 2000: *Epinephelus fuscoguttatus* (n=26), *Epinephelus multinotatus* (n=33), *Epinephelus polyphekadion* (n=77), *Epinephelus tukula* (n=62), *Plectropomus laevis* (n=22) and *Variola louti* (n=101). Growth increments consisting of alternating translucent and opaque bands were observed in transverse sections of sagittae. The von Bertalanffy growth function was fit to size and increment number data, values of the growth coefficient (k) ranged from 0.13 for *E. tukula* to 0.48 for *V. louti*, with a mean value of 0.24 for all species. Estimates of the annual instantaneous rate of natural mortality ranged from 0.13 yr<sup>-1</sup> for *E. polyphekadion* to 0.28 yr<sup>-1</sup> for *V. louti*. The maximum number of putative annuli observed in transverse sections of sagittae ranged from 15 for *V. louti* to 31 for *E. polyphekadion*. While the study demonstrates the utility of structural increments in sagittal otoliths for establishing key demographic characteristics, parameters derived from age estimates are preliminary given the need to validate the periodicity of increment formation. Nevertheless, the results suggest that groupers in general are long-lived, slow-growing species that have low rates of natural mortality. The findings are important to fisheries management and conservation authorities as they support the contention that these species have a low resilience to exploitation and their populations may be particularly vulnerable to overfishing.

**Notes:** 10042

**Reference Type:** Journal Article

**Record Number:** 3

**Author:** E. M. Grandcourt, Cesar, H.S.J.

**Year:** 2003

**Title:** The bio-economic impact of mass coral mortality on the coastal reef fisheries of the Seychelles

**Journal:** Fisheries Research

**Volume:** 60

**Pages:** 539-550

**Start Page:** 539

**Short Title:** The bio-economic impact of mass coral mortality on the coastal reef fisheries of the Seychelles

**Keywords:** Seychelles; benthic habitat; fish; inshore fisheries; climate change; coastal protected areas; special management; 3; Helena Francourt; Reef fisheries; Coral bleaching; Snapper; Grouper; Emperor; Fisheries socio-economics.

**Abstract:** Data collected through a stratified catch and effort survey were used to assess the impact of the 1998 mass coral bleaching event on socio-economic and biological indicators for the coastal reef fisheries of the Seychelles. There was a significant reduction in the abundance index and monthly yields per square kilometre for representatives of the family Siganidae following 1998. However, this was not associated with the bleaching event and conformed with the declining trend prior to the impact. Abundance indices and yields per square kilometre did not change significantly for the primary target families of the handline fisheries (Lutjanidae, Serranidae, Lethrinidae and Carangidae). Declining trends in abundance indices and yields for Octopodidae reversed after 1998, although the phenomena could not be independently linked to coral bleaching. Whilst critical resource based management issues are identified for the demersal handline fishery, the results suggest that there were no negative short-term bio-economic impacts on Seychelles coastal reef fisheries associated with mass coral mortality.

**Notes:** 10043

**Reference Type:** Book Section

**Record Number:** 141

**Author:** J. Haig

**Year:** 1984

**Title:** Land and freshwater crabs of the Seychelles and neighbouring islands.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 123-140

**Chapter:** 7

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Land and freshwater crabs of the Seychelles and neighbouring islands.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; freshwater; invertebrates; coastal habitat; coastal plans; 2; Helena Francourt

**Notes:** 10043

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Report

**Record Number:** 130

**Author:** R. Holland

**Year:** 2000, Sept

**Title:** Does the designation of a marine protected area provide significant protection to seagrass ecosystems?

**Series Title:** Shoals Publication No. D002

**Institution:** Shoals of Capricorn Programme

**Pages:** 104

**Publisher:** C. C. R. Unit

**Short Title:** Does the designation of a marine protected area provide significant protection to seagrass ecosystems?

**Keywords:** Seychelles; benthic habitat; inshore; Coastal protected areas; Continental shelf; environmental sensitivity mapping; special management; 4; Helena Francourt; seagrass; marine protected areas; ecosystems.

**Notes:** 10045

**Research Notes:** Hard copy available at SCMRT (last viewed on 4th Nov 2009)

**Reference Type:** Report

**Record Number:** 129

**Author:** J. C. Ingram

**Year:** 2000

**Title:** Does St. Anne Marine Park offer significant protection to seagrass ecosystems? Assessing biodiversity in the context of marine representation.

**Series Editor:** S. o. C. Programme

**Series Title:** Shoals Publication No. D003

**Pages:** 69

**Publisher:** C. C. R. Unit

**Short Title:** Does St. Anne Marine Park offer significant protection to seagrass ecosystems? Assessing biodiversity in the context of marine representation.

**Keywords:** Seychelles; benthic habitat; inshore; Coastal protected areas; Continental shelf; environmental sensitivity mapping; special management; 4; Helena Francourt; seagrass; marine protected areas; ecosystems.

**Notes:** 10046

**Research Notes:** Hard copy available at SCMRT (last viewed on 4th Nov 2009)

**Reference Type:** Journal Article

**Record Number:** 66

**Author:** C. Israelson, Wohlfarth, B.

**Year:** 1999

**Title:** Timing of the Last-Interglacial High Sea Level on the Seychelles Islands, Indian Ocean

**Journal:** Quaternary Research

**Volume:** 51

**Pages:** 306-316

**Start Page:** 306

**Short Title:** Timing of the Last-Interglacial High Sea Level on the Seychelles Islands, Indian Ocean

**Keywords:** Seychelles; WIO; invertebrates; climate; Geo; sea level; 4; Helena Francourt; last interglaciation; sea level; U–Th dating; corals; Indian Ocean.

**Abstract:** Corals from the Seychelles Islands, Indian Ocean, occur mainly as small coralline algae–vermetid remnants found in cavities adhering to the rock surface, and they rarely attain more than 2 m<sup>2</sup> in area. Samples of *Goniastrea* and *Porites* from elevations between 1.7 and 6 m above present mean sea level were dated by TIMS <sup>238</sup>U–<sup>234</sup>U–<sup>230</sup>Th techniques. The ages from well-preserved corals lie between 131,000 and 122,000 yr B.P., in agreement with most other observations of the last-interglacial sea level. Field evidence and dating from high marine limestones from two sections at La Digue Island indicate a period of coral buildup until 131,000 yr B.P., followed by a drop in sea level between 131,000 and 122,000 yr B.P.

**Notes:** 10047

**Reference Type:** Journal Article

**Record Number:** 29

**Author:** M. P. Janes

**Year:** 2008

**Title:** A study of the Xenidiidae (Octocorallia, Alcyonacea) collected on the “Tyro” expedition to the Seychelles with a description of a new genus and species.

**Journal:** Zool. Med. Leiden

**Volume:** 82

**Pages:** 599-626

**Start Page:** 599

**Short Title:** A study of the Xenidiidae (Octocorallia, Alcyonacea) collected on the “Tyro” expedition to the Seychelles with a description of a new genus and species.

**Keywords:** Seychelles; WIO; invertebrates; benthic habitat; 2; Helena Francourt; Cnidaria; Coelenterata; Octocorallia; Alcyonacea; Xenidiidae; soft corals; Anthelia; Xenia; Heteroxenia; Cespitularia; Ovabunda; Fasciclia.

**Abstract:** An examination of xeniid octocorals was carried out on specimens held in the National Museum of Natural History, Naturalis, Leiden, Netherlands. Samples collected during the Tyro expedition to the Seychelles Islands in the Western Indian Ocean were identified. Six species belong to the genera *Cespitularia*, *Heteroxenia*, and *Ovabunda* are described; five of these are new records for this location. Three new

species belonging to the genera Anthelia, Cespitularia and Ovabunda are illustrated. In addition, a new genus belonging to the family Xeniididae is introduced accompanied by scanning electron micrographs of its sclerites. Gross morphology and the ultra-structure of the sclerites indicate there are some similarities in this new genus with Anthelia. However, the colonial morphology is distinct enough to make this genus unique among the Xeniididae and thus the new genus Fasciclia is introduced.  
**Notes:** 10048

**Reference Type:** Journal Article

**Record Number:** 126

**Author:** S. Jennings, Grandcourt, E.M., Polunin, N.V.C.

**Year:** 1995

**Title:** The effects of fishing on the diversity, biomass and trophic structure of Seychelles' reef fish communities.

**Journal:** Coral Reefs

**Volume:** 14

**Issue:** 225-235

**Short Title:** The effects of fishing on the diversity, biomass and trophic structure of Seychelles' reef fish communities.

**Keywords:** Seychelles; benthic habitat; fish; inshore fisheries; coastal protected areas; special management; 3; Helena Francourt

**Notes:** 10049

**Reference Type:** Journal Article

**Record Number:** 7

**Author:** S. Jennings, Marshall, S.S., Polunin, N. V.C.

**Year:** 1996

**Title:** Seychelles' Marine Protected Areas: Comparative structure and status of reef fish communities.

**Journal:** Biological Conservation

**Volume:** 75

**Pages:** 201-209

**Start Page:** 201

**Type of Article:** Scientific paper

**Short Title:** Seychelles' Marine Protected Areas: Comparative structure and status of reef fish communities.

**Keywords:** Seychelles; benthic habitat; fish; inshore fisheries; coastal protected areas; special management; 3; Helena Francourt; biomass, diversity, marine reserves, reef fishes, Seychelles

**Abstract:** Effective management of Seychelles' reef resources is essential because the conflicting demands of .fishing, tourism and conservation must be reconciled if sustainable

development and the protection of natural resources is to be assured. Marine protected areas play a key role in the existing management strategy and yet there is little quantitative understanding of the benefits they may provide. We compare the biomass and species richness of fish assemblages on coral and granitic reef habitats in four areas which receive different levels of protection from .fishing and other human activities. Species richness of the total fish community, biomass of the total fish community and species richness and biomass of many families were higher on both coralline and granitic reefs in two marine protected areas where protective regulations were effectively enforced. However, the biomass of the three principal families of fishes targeted by the fishery was significantly lower in one of these areas. This was attributed to illegal .fishing and the fishing concessions offered to local people. We conclude that poaching and minor fishing concessions did not affect the aspects of the fish community which are important to most tourist visitors (biomass and overall species richness), but that they have a statistically significant effect on the structure of the fish community. Furthermore, whilst a small well-patrolled area will provide an effective refuge from .fishing, it will often be stocked by larval .fishes which are the progeny of adults living many kilometres away. As such, the protected area cannot operate in isolation to maintain biomass and diversity. A valid longterm aim of reserve management may be to assure the protection of a greater proportion of Seychelles' .fishes throughout their life history. This may be achieved if current plans for the management of marine protected areas can be instituted.

**Notes:** 10050

**Reference Type:** Journal Article

**Record Number:** 125

**Author:** S. Jennings, Boulle, D.P., Polunin, V.C.

**Year:** 1996

**Title:** Habitat correlates of the distribution and biomass of Seychelles' reef fish.

**Journal:** Environmental Biology of Fishes.

**Volume:** 46

**Pages:** 15-25

**Short Title:** Habitat correlates of the distribution and biomass of Seychelles' reef fish.

**Keywords:** Seychelles; benthic habitat; fish; coastal protected areas; special management; 3; Helena Francourt; Chaetodon; Parupeneus; Scarus; Coral reef; Rocky reef; substrate; fishing effects.

**Notes:** 10051

**Reference Type:** Journal Article

**Record Number:** 33

**Author:** S. Jennings

**Year:** 1998

**Title:** Cousin Island, Seychelles: a small, effective and internationally managed marine reserve

**Journal:** Coral Reefs

**Volume:** 17

**Pages:** 190

**Start Page:** 190

**Short Title:** Cousin Island, Seychelles: a small, effective and internationally managed marine reserve

**Keywords:** Seychelles; benthic habitat; fish; coastal protected areas; special management; 4; Helena Francourt; marine reserve; reef fish; coral; management; Seychelles

**Notes:** 10052

**Reference Type:** Journal Article

**Record Number:** 78

**Author:** A. A. Kalugina-Gutnik, Perestenko, L.P., Titlyanova, T.V.

**Year:** 1992

**Title:** Chapter 5: Species composition and abundance of algae and seagrasses of the Seychelles Islands

**Journal:** Atoll Research Bulletin

**Volume:** 369

**Pages:** 1-67

**Short Title:** Chapter 5: Species composition and abundance of algae and seagrasses of the Seychelles Islands

**Keywords:** Seychelles; benthic habitat; coastal protected areas; special management; 3; Helena Francourt; marine algae; seagrass.

**Abstract:** Marine algae and seagrasses of the Republic of the Seychelles remain poorly studied. Macrophytic algae reported for the area (about 120 species) were collected between 1899-1990 by J.

Stanley Gardiner during the Sealark Expedition to the Indian Ocean (Gepp and Gepp 1909; 1911,

Weber van Bosse 1913a, 1913b). Aleem (1984) reported 9 species of seagrasses and 22 algal species

for the macrophyte communities of MahB, Latam, Aldabra, Comoro, Farquhar and Amirantes Islands. Subsequently, 5 seagrasses and 33 algal species were recorded (Titlyanova and Butorin 1987) for MahB and Wetivy Islands, half of these representing new records. There are no data on

either algae or seagrasses for 12 of the Seychelles island groups. The present study of these island

groups focused on: (1) macrophytic species composition; (2) distribution of algae and seagrasses at

different depths for typical ecotopes; and (3) the structure of benthic plant communities (phytocoenoses), including determination of biomass for macroalgae and seagrasses.

**Notes:** 10053

**Reference Type:** Journal Article

**Record Number:** 127

**Author:** M. H. Ledlie, Graham, N.A.J., Bythell, J.C., Wilson, S.K., Jennings, S., Polunin, N.V.C., Hardcastle, J.

**Year:** 2007

**Title:** Phase shifts and the role of herbivory in the resilience of coral reefs.

**Journal:** Coral Reefs

**Volume:** 26

**Pages:** 641-653

**Short Title:** Phase shifts and the role of herbivory in the resilience of coral reefs.

**Keywords:** Seychelles; benthic habitat; fish; climate change; invertebrates; coastal protected areas; special management; 3; Helena Francourt; Recovery; Coral bleaching; Marine protected areas; Coral reef fishes; feeding; observations.

**Notes:** 10054

**Reference Type:** Journal Article

**Record Number:** 34

**Author:** M. M. Littler, Littler, D.S., Titlyanov, E.A.

**Year:** 1991

**Title:** Comparisons of N- and P- limited productivity between high granitic islands versus low carbonate atolls in the Seychelles Archipelago: a test of the relative-dominance paradigm.

**Journal:** Coral Reefs

**Volume:** 10

**Pages:** 199-209

**Start Page:** 199

**Short Title:** Comparisons of N- and P- limited productivity between high granitic islands versus low carbonate atolls in the Seychelles Archipelago: a test of the relative-dominance paradigm.

**Keywords:** Seychelles; primary production; nutrients; benthic production; 3; Helena Francourt; seagrass; marine algae; productivity; granitic; coralline; reef; atoll.

**Abstract:** This exploratory study suggests that different geological systems (carbonate vs. granitic) in tropical waters have contrasting patterns of photosynthetic nutrient limitation correlated with inorganic nitrogen (N) and phosphorous (P) availability. Physiological assays for 21 predominant macrophyte species show that inorganic N and P are much less limiting to photosynthesis on granitic islands than is the case on carbonate islands and that, of the two, P is more likely to limit production in carbonate-rich tropical waters...

**Notes:** 10055

**Reference Type:** Journal Article

**Record Number:** 88

**Author:** M. M. Littler, Littler, D.S.,

**Year:** 1992

**Title:** Chapter 10: Photosynthesis vs. irradiance curves for six species of macroalgae from the Seychelles islands under four levels of nutrient enrichment.



**Journal:** Atoll Research Bulletin

**Volume:** 374

**Pages:** 1-14

**Short Title:** Chapter 10: Photosynthesis vs. irradiance curves for six species of macroalgae from the Seychelles islands under four levels of nutrient enrichment.

**Keywords:** Seychelles; primary production; nutrients; benthic production; 3; Helena Francourt; macroalgae; Photosynthesis; irradiance curve.

**Notes:** 10056

**Reference Type:** Journal Article

**Record Number:** 96

**Author:** M. M. Littler, Littler, D.S.

**Year:** 1992

**Title:** Results of the USSR-USA expedition in Marine Biology to the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 365-378

**Pages:** 5

**Short Title:** Results of the USSR-USA expedition in Marine Biology to the Seychelles Islands.

**Keywords:** Seychelles; WIO; Benthic production; fish; invertebrates; benthic habitat; Benthic production; Coastal protected areas; Special management; 3; Helena Francourt.

**Notes:** 10057

**Reference Type:** Journal Article

**Record Number:** 99

**Author:** A. S. Y. Mackie, Oliver, P.G., Darbyshire, T., Mortimer, K.

**Year:** 2005

**Title:** Shallow marine benthic invertebrates of the Seychelles plateau: high diversity in a tropical oligotrophic environment.

**Journal:** Philosophical Transactions of the royal Society A.

**Volume:** 363

**Pages:** 203-228

**Short Title:** Shallow marine benthic invertebrates of the Seychelles plateau: high diversity in a tropical oligotrophic environment.

**DOI:** 10.1098/rsta.2004.1488

**Keywords:** Seychelles; WIO; invertebrates; benthic habitat; Special management; 3; Helena Francourt; macrobenthos; taxonomy; diversity; tropics; subtropics; temperate.

**Abstract:** Soft sedimentary biotopes are extensive in the shallow Western Indian Ocean, especially

on the Seychelles Plateau and Mascarene Ridge, yet pro rata compared with coral reefs the research effort devoted to them has been minimal. In this study we examine the benthic mollusc and polychaete worm assemblages of the shallow waters (11–62 m) around Mah'é, in the Seychelles, and make direct comparisons with the

temperate Irish Sea area and subtropical waters of Hong Kong, China (using identical methodology).

Two assemblages were recognized, characterized by depth and sediment type. Of these, assemblage A (in shallow carbonate sands) was the most diverse, with diversity and richness measures exceeding those from the Irish Sea or Hong Kong. Hong Kong generally had the poorest fauna. Considering the Bivalvia alone, estimates of taxonomic distinctness showed this to be least for Seychelles assemblage A. The degree of conformity of the results to the concept of the latitudinal gradient in species richness and the possible underlying causes are discussed.

Comparisons with other data suggest that the Seychelles support a benthic fauna at least as diverse as any other described from the tropics. A tentative examination of total bivalve species richness suggests a total of 400–500 for the Seychelles. This is in keeping with other Indian Ocean localities, but higher than known figures for continental east Africa. The findings of this paper support the case for widespread ecological and taxonomic studies of the Western Indian Ocean benthic invertebrates.

**Notes:** 10058

**Reference Type:** Journal Article

**Record Number:** 100

**Author:** W. Macnae

**Year:** 1971

**Title:** Mangroves on Aldabra.

**Journal:** Philosophical Transactions of the Royal Society of London B.

**Volume:** 260

**Pages:** 237-247

**Start Page:** 237

**Short Title:** Mangroves on Aldabra.

**Keywords:** Seychelles; benthic habitat; Coastal protected areas; Special management; 3; Helena Francourt; Aldabra; mangroves.

**Notes:** 10059

**Reference Type:** Journal Article

**Record Number:** 77

**Author:** A. N. Malyutin

**Year:** 1992

**Title:** Octocorallia from the Seychelles islands with some ecological observations

**Journal:** Atoll Research Bulletin

**Volume:** 367

**Pages:** 1-4

**Start Page:** 1

**Short Title:** Octocorallia from the Seychelles islands with some ecological observations

**Keywords:** Seychelles; invertebrates; Benthic habitat; Special management; 2; Helena

Francourt.

**Abstract:** Octocorals are among the prominent components of reef communities of the Seychelles, but little faunistic information has been available (Thomson and Mackinnon 1910, Verseveldt 1976).

Practically nothing is known about their vertical distribution on tropical reefs. This paper is a preliminary report on the identification of the octocoral collections made during the voyage of the

R/V Akademik Nesmevanov from January to March 1989, with some ecological observations.

The following checklist presents a survey of the species collected during this voyage in addition to

species recorded earlier.

**Notes:** 10060

**Reference Type:** Journal Article

**Record Number:** 31

**Author:** T. R. McClanahan, Ateweberhan, M., Graham, N.A.J., Wilson, S.K., Sebastian, C.R., Guillaume, M.M.M., Bruggemann, J.H.

**Year:** 2007

**Title:** Western Indian Ocean coral communities: bleaching responses and susceptibility to extinction.

**Journal:** Marine Ecology Progress Series

**Volume:** 337

**Pages:** 1-13

**Start Page:** 1

**Short Title:** Western Indian Ocean coral communities: bleaching responses and susceptibility to extinction.

**Keywords:** Seychelles; WIO; invertebrates; climate change; benthic habitat; 4; Helena Francourt; ENSO; Biodiversity; Climate change; Degree Heating Weeks; Meta-population; Monitoring; Remote sensing; Seawater temperature.

**Abstract:** A field study of coral bleaching and coral communities was undertaken spanning 8 countries and ~35° of latitude in 2005. This was combined with studies in southern Kenya and northeast Madagascar in 1998 and Mauritius in 2004 to develop a synoptic analysis of coral community structure, bleaching response, susceptibility of the communities to bleaching, and the relative risk of extinctions in western Indian Ocean coral reefs. Cluster analysis identified 8 distinct coral communities among the 91 sites sampled, with 2 distinct communities in northern South Africa and central Mozambique, a third in the central atolls of the Maldives, and 5 less differentiated groups, in a swath from southern Kenya to Mauritius, including Tanzania, the

granitic islands of the Seychelles, northeast Madagascar, and Réunion. Massive Porites, Pavona, and Pocillopora dominated the central and northern Indian Ocean sites and, from historical records, replaced dominance by Acropora and Montipora. From southern Kenya to Mauritius, coral communities were less disturbed, with Acropora and Montipora dominating, and a mix of subdominants including branching Porites, Fungia, Galaxea, massive Porites, Pocillopora, and Synarea. The survey identified an area from southernmost Kenya to Tanzania as having the least disturbed and highest diversity reefs, and as being a regional priority for management. Taxa vulnerable to future extinction based on their response to warm water, population density, and commonness include largely low-diversity genera with narrow environmental ranges, such as Gyrosmilia interrupta, Plesiastrea versipora, Plerogyra sinuosa, and Physogyra lichtensteini.

**Notes:** 10061

**Reference Type:** Journal Article

**Record Number:** 101

**Author:** C. C. Mees, Rousseau, J.A.

**Year:** 1997

**Title:** The potential yield of lutjanid fish *Pristipomoides filamentosus* from the Mahe plateau, Seychelles: managing with uncertainty.

**Journal:** Fisheries Research

**Volume:** 33

**Pages:** 73-87

**Short Title:** The potential yield of lutjanid fish *Pristipomoides filamentosus* from the Mahe plateau, Seychelles: managing with uncertainty.

**Keywords:** Seychelles; WIO; fish; inshore; inshore fisheries; 3; Helena Francourt; *Pristipomoides jifilamentosus*; Fisheries management; Growth; Seychelles; Stock recruitment relationship; Deterministic equilibrium; Simulation; Targets  
Yield; MSY

**Abstract:** Limited data are available on which to base management decisions for *Pristipomoides filamentosus* around the periphery of the Mahe Plateau, Seychelles. Analyses of length frequency data, which generate results of uncertain accuracy, particularly for long lived slow growing species, were employed to derive biological parameters for management simulations based on yield per recruit analyses. These parameters were used to derive management targets for the fishery, and to assess its current state. The sensitivity of these outputs to uncertainty in the estimated parameters and unknowns such as the stock recruitment relationship was determined. The practicality and effect of effort and length controls were investigated. Effort targets that are slightly more conservative than (maximum sustainable yield) MSY can provide security against uncertainty

at a relatively low cost. However, assessment of the current fishing mortality is far more sensitive to inaccuracies in parameter estimation, and should be supported by other methods where possible. It is concluded that current length at capture is appropriate but should not be allowed to decrease greatly. There appears to be excess capacity in the fishery, but it is recommended that any effort increases be implemented slowly and with due caution. If substantial increases are desirable, additional research should focus on alternative methods for estimating fishing mortality.

**Notes:** 10062

**Reference Type:** Journal Article

**Record Number:** 62

**Author:** N. A. Milchakova, Phillips, R.C., Ryabogina, V.G.

**Year:** 2005

**Title:** New data on the locations of seagrass species in the Indian Ocean.

**Journal:** Atoll Research Bulletin

**Volume:** 537

**Short Title:** New data on the locations of seagrass species in the Indian Ocean.

**Keywords:** Seychelles; WIO; benthic habitat; special management; 3; Helena Francourt; seagrass.

**Abstract:** Localities and depths are described for seven seagrasses (*Syringodium isoetifolium*, *Halodule uninervis*, *Cymodocea rotundata*, *Thalassodendron ciliatum*, *Halophila decipiens*, *Halophila stipulacea* and *Enhalus acoroides*) collected in the Indian Ocean during four expeditions. These data are compared with those reported from the literature. Maps showing the formerly unknown localities are given.

**Notes:** 10063

**Reference Type:** Journal Article

**Record Number:** 117

**Author:** D. Monticelli, Ramos, J.A., Doucet, J.

**Year:** 2008

**Title:** Influence of woodland cover on habitat selection and reproductive parameters of tropical roseate terns: implications for colony management.

**Journal:** Endangered Species Research

**Volume:** 4

**Pages:** 257-266

**Short Title:** Influence of woodland cover on habitat selection and reproductive parameters of tropical roseate terns: implications for colony management.

**ISSN:** 10.3354/esr00079

**Keywords:** Seychelles; birds; coastal protected areas; special management; 3; Helena Francourt; Seabird colonies; *Sterna dougallii*; Habitat preference; Western Indian Ocean; Canopy cover; *Pisonia grandis*

**Abstract:** We examined the effect of vegetation structure, in particular canopy closure, on

colony

site occupancy, nesting densities, and reproductive parameters of roseate terns *Sterna dougallii* breeding in a *Pisonia grandis* dominated woodland on Aride Island, Seychelles, western Indian Ocean. Long-term observations (1995 to 2006) revealed that areas with high vegetation density and

canopy cover (>50%) were abandoned, in favour of nearby more open forest areas, such as clearings.

The attractiveness of a forest clearing (0 to 25% canopy cover) to breeding birds was also largely supported

by experimental manipulation of vegetation density in 2004. Most birds moved from areas under canopy cover to experimentally cleared plots, where they nested at higher densities and had a

higher probability of successfully fledging a chick. However, some individuals remained in their original

areas, despite their greater canopy cover, and had a lower fledging success. This site tenacity is presumably explained by an imprinting process leading some birds to breed in successive years in

the same, familiar locations, despite their nest-sites having become sub-optimal for fledging success.

Roseate terns choosing a nest site in woodland on Aride must trade off the need for some cover, offering

protection from the sun, against the need for easy access through gaps in the canopy to fly to and

from their nests. A suitable nest-site should also minimize chick/parent infestation by ticks and mortality

caused by contamination of feathers with the sticky fruits of *Pisonia grandis*. We suggest that, when they are not formed naturally, small artificial forest clearings within the usual breeding area

are likely to be attractive for roseate terns and may result in enhanced colony productivity.

These

findings may be applicable to other seabird colonies (e.g. sooty terns) found under forest cover on

oceanic islands throughout the Indo-Pacific region.

**Notes:** 10064

**Reference Type:** Journal Article

**Record Number:** 47

**Author:** J. A. Mortimer

**Year:** 1988

**Title:** Green turtle nesting at Aldabra atoll- population estimates and trends.

**Journal:** Biol. Soc. Wash.

**Volume:** 8

**Pages:** 116-128

**Start Page:** 116

**Date:** 13 sept 1988

**Short Title:** Green turtle nesting at Aldabra atoll- population estimates and trends.

**Keywords:** Seychelles; Reptiles; Coastal protected areas; Special management; 3; Helena Francourt; Green turtle; Chelonia mydas; Aldabra.

**Abstract:** Green turtle (*Chelonia mydas*) nesting activity was monitored on the beaches of Aldabra Atoll during the years 1981—1985 . Fresh tracks were counted regularly on the southwest coast beaches and more sporadically on the north, northwest, and south coasts. Based on these data the total numbers of nesting emergences per year were estimated . Depending on the particle size distribution and moisture content of the beach sand, turtles emerged an average of 1.4 to 3.2 times before laying a clutch of eggs . These figures were used to estimate the numbers of egg clutches deposited on the atoll each year. Assuming that turtles lay an average of 5.5 egg clutches during a season, the following numbers of females are estimated to have nested on the beaches of Aldabra : in 1981, 882—1556; in 1982, 946—1598; in 1983, 974—1896; in 1984, 1083—2148; and in 1985, 820—1452 . This suggests an important increase in the nesting population during the past twenty years, but nesting levels are still below those estimated at the turn of the century . With sustained conservation efforts further increase in the numbers of turtles is anticipated . Nesting density should continue to be monitored at Aldabra, using consistent methodology from year to year, in order to evaluate the status of the population and to ascertain that annual fluctuations are not responsible for the observed increase .

**Notes:** 10065

**Reference Type:** Journal Article

**Record Number:** 55

**Author:** A. V. Novozhilov, Chernova, Y.N., Tsukurov, I.A., Denisov, V.A., Propp, L.N.

**Year:** 1992

**Title:** Chapter 2: Characteristics of oceanographic processes on reefs of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 366

**Pages:** 37

**Start Page:** 1

**Short Title:** Chapter 2: Characteristics of oceanographic processes on reefs of the Seychelles Islands.

**Keywords:** Seychelles; currents; inshore; 3; Helena Francourt; oceanography; reefs.

**Notes:** 10066

**Reference Type:** Report

**Record Number:** 30

**Author:** D. Obura, Abdulla, A.

**Year:** 2005

**Title:** Assessment of Tsunami Impacts on the Marine Environment of the Seychelles.

**Series Title:** Requested by the Seychelles Ministry of Environment and written in conjunction with the Seychelles Centre for Marine Research and Technology – Marine Park Authority.

**Pages:** 17

**Short Title:** Assessment of Tsunami Impacts on the Marine Environment of the Seychelles.

**Keywords:** Seychelles; tides; coastal habitat; 3; Helena Francourt; Tsunami; impacts; marine environment

**Abstract:** Two major patterns in coral reef damage were noted, controlled by the geographic location of each island and exposure direction of each site, and reef substrate. The northern islands clustered around Praslin (including Curieuse, La Digue, Felicite and the rocks of Isle Coco and St. Pierre) showed very high levels of damage (approaching 100%) on carbonate reef substrates. By contrast, sites around Mahe showed much lower levels of impact, generally below 10%. The limited damage on Mahe is due to the shelter provided by the outer northern islands and dissipation of wave energy as the tsunami traveled over the greater distance of shallow water from the outer edge of the banks to Mahe...

**Notes:** 10067

**Reference Type:** Journal Article

**Record Number:** 102

**Author:** D. O. Obura

**Year:** 2005

**Title:** Resilience and climate change: lessons from coral reefs and bleaching in the Western Indian Ocean.

**Journal:** Estuarine, Coastal and Shelf Science

**Volume:** 63

**Pages:** 353-372

**Start Page:** 372

**Short Title:** Resilience and climate change: lessons from coral reefs and bleaching in the Western Indian Ocean.

**DOI:** 10.1016/j.ecss.2004.11.010

**Keywords:** Seychelles; WIO; climate change; benthic habitat; invertebrates; ocean temperature; Special management; 4; Helena Francourt; coral bleaching; thermal stress; spatial resilience; protection; resistance; tolerance

**Abstract:** The impact of climate change through thermal stress-related coral bleaching on coral reefs of the Western Indian Ocean has been well documented and is caused by rising sea water temperatures associated with background warming trends and extreme climate events. Recent studies have identified a number of factors that may reduce the impact of coral bleaching and mortality at a reef or subreef level. However, there is little scientific consensus as yet, and it is unclear how well current science supports the immediate needs of management responses to



climate change. This paper provides evidence from the Western Indian Ocean in support of recent hypotheses on coral and reef vulnerability to thermal stress that have been loosely termed 'resistance and resilience to bleaching'. The paper argues for a more explicit definition of terms, and identifies three concepts affecting coral-zooxanthellae holobiont and reef vulnerability to thermal stress previously termed 'resistance to bleaching': 'thermal protection', where some reefs are protected from the thermal conditions that induce bleaching and/or where local physical conditions reduce bleaching and mortality levels; 'thermal resistance', where individual corals bleach to differing degrees to the same thermal stress; and 'thermal tolerance', where individual corals suffer differing levels of mortality when exposed to the same thermal stress. 'Resilience to bleaching' is a special case of ecological resilience, where recovery following large-scale bleaching mortality varies according to ecological and other processes. These concepts apply across multiple levels of biological organization and temporal and spatial scales. Thermal resistance and tolerance are genetic properties and may interact with environmental protection properties resulting in phenotypic variation in bleaching and mortality of corals. The presence or absence of human threats and varying levels of reef management may alter the influence of the above factors, particularly through their impacts on resilience, offering the opportunity for management interventions to mitigate the impacts of thermal stress and recovery on coral reefs. These concepts are compiled within an overarching framework of spatial resilience theory. This provides a framework for developing linked scientific and management questions relating to the larger scale impacts of climate change on coral reefs, their management needs and prospects for their future.

**Notes:** 10068

**Reference Type:** Journal Article

**Record Number:** 93

**Author:** V. S. Odintsov

**Year:** 1992

**Title:** Chapter 8: Nitrogen fixing activity associated with subtidal macrophytes of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 372

**Pages:** 1-4

**Short Title:** Chapter 8: Nitrogen fixing activity associated with subtidal macrophytes of the Seychelles Islands.

**Keywords:** Seychelles; benthic habitat; inshore; Coastal protected areas; Continental shelf; special management; 4; Helena Francourt; Algae; nitrogen fixing.

**Abstract:** The ability of microorganisms to fix dinitrogen has significance for the functioning of marine

ofihore ecosystems in oligotrophic oceanic regions. The most effective utilization of fixed nitrogen

occurs in associations of nitrogen-fixing microorganisms with macrophytes where direct contact is

present. There are many examples (e.g., Harlin and Craigie 1975, Wetzel and Penhale 1979) of

intensive exchange of nitrogen, phosphorus and carbon between epiphytes and their host macrophytes. It is known (Jones and Stewart 1969) that macrophytes consume fixed nitrogen released by nitrogen-fixing epiphytes. In some macrophyte communities, the correlation between productivity and epiphytic nitrogen fixation has been shown (Capone et al. 1979). Epiphytic nitrogen fixing activity associated with brown algae such as *Sargassum* may be so high that 40% of the nitrogen requirements of the algae can be met by such nitrogen fixation, assuming that all of the fixed nitrogen is consumed (Carpenter 1972, Hanson 1977, Odintsov and Lapteva 1984, Odintsov 1988).

**Notes:** 10069

**Reference Type:** Journal Article

**Record Number:** 128

**Author:** S. Ohtsuka, Conway, D.V.P.

**Year:** 2005

**Title:** A new species of *Tortanus* (*Atortus*) (Copepoda: Calanoida: Tortanidae) from the Seychelles, Mauritius and Madagascar.

**Journal:** J. Mar. Biol. Ass. U.K.

**Volume:** 85

**Pages:** 65-70

**Short Title:** A new species of *Tortanus* (*Atortus*) (Copepoda: Calanoida: Tortanidae) from the Seychelles, Mauritius and Madagascar.

**Keywords:** Seychelles; WIO; invertebrates; micro; 3; Helena Francourt; Copepoda; *Tortanus*.

**Notes:** 10070

**Reference Type:** Journal Article

**Record Number:** 90

**Author:** T. R. Parnik, Bil', K.Y., Kolmakov, P.V., Titlyanov, E.A.

**Year:** 1992

**Title:** Chapter 12: Photosynthesis of the seagrass *Thalassodendron ciliatum*: leaf morphology and carbon metabolism.

**Journal:** Atoll Research Bulletin

**Volume:** 376

**Pages:** 1-13

**Short Title:** Chapter 12: Photosynthesis of the seagrass *Thalassodendron ciliatum*: leaf morphology and carbon metabolism.

**Keywords:** Seychelles; benthic habitat; inshore; Coastal protected areas; Continental shelf; special management; 4; Helena Francourt; *Thalassodendron ciliatum*; seagrass; photosynthesis.

**Abstract:** The kinetics of the incorporation of <sup>14</sup>C into photosynthates during labeling and

pulse-chase

experiments has shown that the seagrass *Thalassodendron ciliatum* (Forsk.) den Hartog is a typical

C3 plant. Both adaxial and abaxial leaf surfaces lack stomata and are covered with a thin layer of

epidermal cells containing chlorophyll. 80% of the leaf volume is occupied by chlorophyll-free heterotrophic cells. Respiration of these unpigmented cells is equivalent to 66% of the gross photosynthetic rate. The molar rate determined from  $^{14}\text{C}$  uptake during a 10 min exposure is 0.2

mmol  $\text{CO}_2$  per g dry weight per hour and exceeds the apparent  $\text{O}_2$  release by 3 fold.

Environmental

conditions favorable for *Thalassodendron ciliatum* extend to the depth of 26 m. The half-maximum

$\text{CO}_2$  uptake rate is achieved at a light level of  $1.5 \sim \mu\text{mol photons m}^{-2} \text{ s}^{-1}$  in plants from both deep (33 m) and shallow (0.5 m) waters. In plants growing 33 m deep, photoassimilation of  $\text{CO}_2$  is relatively slow at

all light intensities and tissues contain higher levels of flavonoids. The amino acid contents of mature leaves are identical in shallow and deepwater plants, whereas the younger leaves of deepwater plants are poorer in proline and cysteine. In contrast to terrestrial plants, the pH in the

sap of heterotrophic cells increases during the daytime and reaches a value of 6.1 by nightfall.

Acidification of the sap reaches pH 5.6 from dawn into early morning due to the formation of malate

from bicarbonate in the dark.

**Notes:** 10071

**Reference Type:** Book Section

**Record Number:** 50

**Author:** R. Payet, Bijoux, J., Adam, P.A.

**Year:** 2005

**Title:** Status and recovery of carbonate and granitic reefs in the Seychelles inner islands and implications for management.

**Editor:** D. Souter, Linden, O.

**Book Title:** Coral reef degradation in the Indian Ocean; status report 2005

**Publisher:** CORDIO

**Pages:** 132-145

**Short Title:** Status and recovery of carbonate and granitic reefs in the Seychelles inner islands and implications for management.

**Keywords:** Seychelles; WIO; climate change; benthic habitat; invertebrates; ocean temperature; Special management; 4; Helena Francourt; coral bleaching; thermal stress; spatial resilience; recovery; carbonate; granitic

**Notes:** 10072

**Research Notes:** Book available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Book Section

**Record Number:** 151

**Author:** R. Payet

**Year:** 2005

**Title:** Indian Ocean Islands-Summary

**Editor:** D. Souter, Linden, O.

**Book Title:** Coral reef degradation in the Indian Ocean- Status Report 2005

**City:** Kalmar, Sweden

**Publisher:** CORDIO

**Pages:** 128-131

**Series Editor:** CORDIO

**Short Title:** Indian Ocean Islands-Summary

**Keywords:** Seychelles; WIO; climate change; benthic habitat; invertebrates; ocean temperature; Special management; 3; Helena Francourt; Indian Ocean Islands; Coral Reefs; coral bleaching; tsunami; climate change

**Notes:** 10073

**Research Notes:** Book available at SCMRT (last viewed 5/11/2009)

**Reference Type:** Journal Article

**Record Number:** 40

**Author:** R. Payet

**Year:** 2006

**Title:** Decision processes for large marine ecosystems management and policy.

**Journal:** Ocean & Coastal Management

**Volume:** 49

**Pages:** 110-132

**Start Page:** 110

**Short Title:** Decision processes for large marine ecosystems management and policy.

**Keywords:** Seychelles; WIO; Admin-Sea; legislation; Govt authorities; management; 5; Helena Francourt.

**Abstract:** A number of studies have speculated on the utility of publicly available information for decisionmaking

in the context of large marine ecosystems (LME) management. An indicator-based study using the pressure-state-response model was carried out among senior decision-makers in the Seychelles government to determine (i) whether the precautionary principle is applied in policy development; (ii) the relative importance of 'control-and-command' and market mechanisms in the management of living marine resources; (iii) the influence of public opinion in decision-making and

(iv) linkages between the various LME management modules. Results indicate that policy-makers in

Seychelles apply the precautionary principle in most situations, are more oriented towards the 'command-and-control' approach, and are very sensitive to public opinions. The study further indicated that whilst policy-makers in Seychelles acknowledged the use of indicators within the LME

strategy, some gaps including limitations of indicators in conveying complex interactions were identified which require further study.

**Notes:** 10074

**Reference Type:** Thesis

**Record Number:** 53

**Author:** R. A. Payet

**Year:** 2005

**Title:** Sustainability in the context of coastal and marine tourism in Seychelles.

**Academic Department:** Faculty of Natural Sciences and Engineering

**University:** University of Kalmar

**Degree:** Doctoral

**Number of Pages:** 147

**Date:** 2006

**Thesis Type:** Doctoral thesis

**Short Title:** Sustainability in the context of coastal and marine tourism in Seychelles.

**Call Number:** Series number 33

**Keywords:** Seychelles; coastal tourism; private sector; NGOs; Govt authorities; Coastal plans; 4; Helena Francourt

**Notes:** 10076

**Reference Type:** Journal Article

**Record Number:** 103

**Author:** M. Pfeiffer, Dullo, W.

**Year:** 2006

**Title:** Monsoon-induced cooling of the western equatorial Indian Ocean as recorded in coral oxygen isotope records from the Seychelles covering the period of 1840–1994 AD.

**Journal:** Quaternary Science Reviews

**Volume:** 25

**Pages:** 993-100

**Start Page:** 993

**Short Title:** Monsoon-induced cooling of the western equatorial Indian Ocean as recorded in coral oxygen isotope records from the Seychelles covering the period of 1840–1994 AD.

**DOI:** 10.1016/j.quascirev.2005.11.005

**Keywords:** Seychelles; invertebrates; currents; ocean temperature; 3; Helena Francourt; oxygen isotop; equatorial; coral

**Abstract:** We have developed a new, bimonthly resolved coral d18O time series from the Seychelles (551E, 41S). Our coral time series covers the period of 1840–1994 AD and shows

stable correlations with regional sea surface temperatures over the past 50 years. The strength of the proxy-climate relationship depends on the annual cycle of the Asian monsoon. Seasonal correlation patterns suggest that the coral primarily records the boreal summer cooling in the western Indian Ocean and Arabian Sea, which results from wind-induced mixing and evaporation during the SW monsoon season. We have combined our coral time series with an existing 150-year long coral record from the Seychelles to strengthen the climatic signals recorded in the two cores. This new coral index shows a strong correlation with historical surface temperatures from the Arabian Sea and India, suggesting that the corals can be used to reconstruct regional temperature trends in pre-instrumental times. The coral index also shows a significant correlation with the Niño 3.4 index, which captures the ENSO phenomenon centred in the tropical Pacific. Cross-spectral analysis confirms that the coral index and Niño 3.4 are coherent at decadal periods, supporting the notion that decadal El Niño-like variability influences the Indian Ocean.

**Notes:** 10077

**Reference Type:** Unpublished Work

**Record Number:** 65

**Author:** S. J. Pittman

**Year:** 1995

**Title of Work:** Marine invertebrate communities of Baie Ternay National Marine Park and Baie Beau Vallon, Mahe, Seychelles. (Unpub).

**Series Title:** Seychelles Marine Conservation Expedition.

**Pages:** 22

**Short Title:** Marine invertebrate communities of Baie Ternay National Marine Park and Baie Beau Vallon, Mahe, Seychelles. (Unpub).

**Keywords:** Seychelles; invertebrates; marine protected areas; Benthic habitat; 3; Helena Francourt; Baie Ternay.

**Notes:** 10078

**Reference Type:** Unpublished Work

**Record Number:** 111

**Author:** S. J. Pittman

**Year:** 1996

**Title of Work:** Coral reef fish assemblages of Baie Ternay National Marine Park and Baie Beau Vallon, Mahe, Seychelles (Unpub).

**Series Title:** Seychelles Marine Parks Expedition.

**Pages:** 29

**Short Title:** Coral reef fish assemblages of Baie Ternay National Marine Park and Baie Beau Vallon, Mahe, Seychelles (Unpub).

**Keywords:** Seychelles; fish; marine protected areas; 2; Helena Francourt; Baie Ternay; Marine National Park; Beau Vallon.

**Notes:** 10079

**Research Notes:** Simon Pittman reports folder at SCMRT (SNPA).

**Reference Type:** Unpublished Work

**Record Number:** 8

**Author:** S. J. Pittman

**Year:** 1997

**Title of Work:** Coral reef fish assemblages of coralline and granitic habitats of Curieuse Marine National Park.

**Series Title:** Seychelles Marine Conservation Expedition, Nov-Dec, 1996

**Pages:** 93

**Short Title:** Coral reef fish assemblages of coralline and granitic habitats of Curieuse Marine National Park.

**Keywords:** Seychelles; fish; marine protected areas; 2; Helena Francourt; Reef fish, Curieuse, Coralline, granitic

**Notes:** 10080

**Reference Type:** Unpublished Work

**Record Number:** 112

**Author:** S. J. Pittman

**Year:** 1997

**Title of Work:** Distribution of commercially important fish species of Curieuse Marine National Park.

**Series Title:** Seychelles Marine Conservation Expedition, Nov-Dec, 1996

**Pages:** 7

**Short Title:** Distribution of commercially important fish species of Curieuse Marine National Park.

**Keywords:** Seychelles; fish; marine protected areas; inshore fisheries; 2; Helena Francourt; Reef fish, Curieuse, Coralline, granitic

**Notes:** 10081

**Research Notes:** Found in Simon Pittman reports folder

**Reference Type:** Book Section

**Record Number:** 143

**Author:** N. V. C. Polunin

**Year:** 1984

**Title:** Marine fishes of the Seychelles.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 171-192

**Chapter:** 9

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Marine fishes of the Seychelles.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; fish; marine protected areas; 3; Helena Francourt

**Notes:** 10083

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Journal Article

**Record Number:** 86

**Author:** M. V. Propp, Odintsov, V.S., Propp, L.N.

**Year:** 1992

**Title:** Chapter 7: Nitrification, denitrification and nitrogen fixation in bottom sediments of lagoons of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 371

**Pages:** 1-16

**Short Title:** Chapter 7: Nitrification, denitrification and nitrogen fixation in bottom sediments of lagoons of the Seychelles Islands.

**Keywords:** Seychelles; benthic habitat; primary production; inshore; Coastal protected areas; Continental shelf; special management; 4; Helena Francourt; Algae; nitrification; lagoons

**Notes:** 10084

**Reference Type:** Journal Article

**Record Number:** 116

**Author:** J. A. Ramos, Maul, A.M., Ayrton, V., Bullock, I., Hunter, J., Bowler, J., Castle., Mileto, R., Pacheco, C.

**Year:** 2002

**Title:** Influence of local and large-scale weather events and timing of breeding on tropical roseate tern reproductive parameters.

**Journal:** Marine Ecology Progress Series

**Volume:** 243

**Pages:** 271-279

**Short Title:** Influence of local and large-scale weather events and timing of breeding on tropical roseate tern reproductive parameters.

**Keywords:** Seychelles; birds; 5; Helena Francourt; Roseate tern; El Niño; Seabird ecology; Tropical seabirds; Productivity; Timing of breeding.

**Abstract:** We analysed the effects of local- (sea-surface temperature [SST] and windspeed) and large- (multivariate El Niño index) scale weather conditions and timing of breeding on reproductive



parameters of tropical roseate terns *Sterna dougallii* on Aride Island, Seychelles, using up to 17 years of data. The size of the breeding population and initiation of breeding were negatively and positively correlated, respectively, with both SST and the multivariate El Niño index for the laying season (May-June). It is the first time that an El Niño index obtained for the Pacific Ocean is shown to be correlated with reproductive parameters of seabirds in the Indian Ocean. Hatching success decreased significantly with later initiation of breeding. Virtually no chicks fledged when breeding started in June (40% of the years monitored). We suggest that oceanographic conditions over a relatively large scale have an influence on tern arrival date to the breeding grounds and that SST around the breeding colony influences the number of birds that attempt to breed. Despite the influence of factors such as predatory fish on food availability, this influence appears to be overridden by the importance of weather events and oceanographic conditions, which are likely to determine marine productivity. This study suggests that ecosystem-level phenomena appear to be important in shaping the population dynamics of tropical roseate terns.

**Notes:** 10085

**Reference Type:** Journal Article

**Record Number:** 118

**Author:** B. J. Reville

**Year:** 1983

**Title:** Number of Nesting Frigatebirds, *Fregata minor* and *F. ariel*, on Aldabra Atoll Nature Reserve, Seychelles.

**Journal:** Biological Conservation

**Volume:** 27

**Pages:** 59-76

**Short Title:** Number of Nesting Frigatebirds, *Fregata minor* and *F. ariel*, on Aldabra Atoll Nature Reserve, Seychelles.

**Keywords:** Seychelles; birds; 5; Helena Francourt; Aldabra; frigatebirds

**Abstract:** Aldabra Atoll, a strict Nature Reserve and major breeding station of lesser and greater frigatebirds, may be developed for tourism.

Determining whether this affects the frigate breeding populations is complicated by their extended annual laying seasons and the biennial breeding periodicity of individuals rearing fledgelings. This study, using a census method incorporating adjustments for seasonal changes in nest

numbers, changes in nest ownership and replacement laying, indicates that there are at least 4000 pairs of greater frigatebirds and 6000 pairs of lesser frigatebirds annually involved in breeding activities. There is some evidence that more male than female greater frigatebirds attempt to pair each season. Comparison with an earlier census suggests that severe human disturbance induces curtailment of laying seasons, major changes in nest distribution and prevents many birds from breeding.

**Notes:** 10086

**Reference Type:** Thesis

**Record Number:** 159

**Author:** W. D. Robbins

**Year:** 2006

**Title:** Abundance, demography and population structure of the grey reef shark (*Charcarhinus amblyrhynchos*) and the white tip reef shark (*Triaenodon obesus*) (Fam. Charcharhinidae).

**Academic Department:** School of Marine Biology and Aquaculture

**City:** Townsville

**University:** James Cook University

**Degree:** PhD

**Number of Pages:** 197

**Short Title:** Abundance, demography and population structure of the grey reef shark (*Charcarhinus amblyrhynchos*) and the white tip reef shark (*Triaenodon obesus*) (Fam. Charcharhinidae).

**Keywords:** Seychelles; WIO; Fish; marine protected areas; 2; Helena Francourt; abundance; demography; grey reef shark; white tip reef shark; Charcharhinidae.

**Notes:** 10087

**Reference Type:** Report

**Record Number:** 133

**Author:** J. Robinson, Callow, M., Lawton, S., Talma, E.

**Year:** 1999

**Title:** Monitoring of the East Coast Phase III dredging and land reclamation project.

**Series Title:** Interim Progress Report: September 1999

**Institution:** Shoals of Capricorn Programme.

**Pages:** 17

**Short Title:** Monitoring of the East Coast Phase III dredging and land reclamation project.

**Keywords:** Seychelles; benthic habitat; coastal habitat; inshore; 2; Helena Francourt; reclamation; dredging; Mahe; East coast.

**Notes:** 10088

**Research Notes:** Hard copy available at SCMRT (last viewed on 5th Nov 2009)

**Reference Type:** Journal Article

**Record Number:** 37

**Author:** P. Ronnback, Bryceson, I., Kautsky, N.

**Year:** 2002

**Title:** Coastal Aquaculture Development in Eastern Africa and the Western Indian Ocean: Prospects and Problems for Food Security and Local Economies.

**Journal:** Ambio

**Volume:** 31

**Issue:** 7-8

**Pages:** 537-542

**Short Title:** Coastal Aquaculture Development in Eastern Africa and the Western Indian Ocean: Prospects and Problems for Food Security and Local Economies.

**Keywords:** WIO; western Indian ocean; invertebrates; fish; coastal habitat; inshore fisheries; Special management; 2; Helena Francourt; aquaculture; seaweed; mollusc; crustacean

**Abstract:** This paper reviews the experience and status of coastal aquaculture of seaweeds, mollusks, fish and crustaceans in eastern Africa and the islands of the western Indian Ocean. In many respects, coastal aquaculture is still in its infancy in the region, and there is a pressing need to formulate development strategies aimed at improving the income and assuring the availability of affordable protein to coastal communities. This paper also draws from positive and negative experiences in other parts of the world. The requirements of feed and fry, and the conversion of mangroves are used to illustrate how some aquaculture activities constitute a net loss to global seafood production. The paper presents both general and specific sustainability guidelines based on the acknowledgement of aquaculture as an ecological process. It is concluded that without clear recognition of its dependence on natural ecosystems, the aquaculture industry is unlikely to develop to its full potential in the region.

**Notes:** 10089

**Reference Type:** Journal Article

**Record Number:** 68

**Author:** N. I. Selin, Latypov, Y.Y., Malyutin, A.N., Bolshakova, L.N.

**Year:** 1992

**Title:** Chapter 4: Species composition and abundance of corals and other invertebrates on the reefs of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 368

**Pages:** 1-9

**Short Title:** Chapter 4: Species composition and abundance of corals and other invertebrates on the reefs of the Seychelles Islands.

**Keywords:** Seychelles; Benthic habitat; invertebrates; Coastal protected areas; special management; 3; Helena Francourt; coral reef

**Abstract:** Coral reefs of the Seychelles Islands are not as well studied as those of Kenya, Madagascar and the Chagos Archipelago. Present knowledge is based on the collections of J. Stanley Gardiner

made

at the beginning of this century and on several later investigations performed on the reefs of Mahe

Island and Aldabra Atoll (Gardiner 1936, Levi 1961, Lewis 1968, Rosen 1971,1979). This study deals with the distributional patterns of corals, molluscs, sponges and other common macrobenthic

invertebrates of the Seychelles Islands coastal zones.

**Notes:** 10090

**Reference Type:** Report

**Record Number:** 59

**Author:** SFA

**Year:** 2002

**Title:** Seychelles Fishing Authority Annual Report 2002

**Series Title:** SFA Annual Reports

**Pages:** 65

**Short Title:** Seychelles Fishing Authority Annual Report 2002

**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 4; Helena Francourt

**Notes:** 10091

**Reference Type:** Report

**Record Number:** 36

**Author:** SFA

**Year:** 2003

**Title:** Seychelles Fishing Authority Annual Report 2003

**Series Editor:** SFA

**Series Title:** Seychelles Fishing Authority Annual Report

**City:** Victoria

**Institution:** SFA

**Pages:** 71

**Publisher:** SFA

**Short Title:** Seychelles Fishing Authority Annual Report 2003

**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 4; Helena Francourt; SFA, fishing, fish catch, bycatch, fisheries.

**Notes:** 10092

**Reference Type:** Report

**Record Number:** 58

**Author:** SFA

**Year:** 2004

**Title:** Seychelles Fishing Authority Annual Report 2004

**Series Title:** SFA Annual Reports

**Pages:** 83

**Short Title:** Seychelles Fishing Authority Annual Report 2004

**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 4; Helena Francourt; SFA, fishing, fish catch, bycatch, fisheries.

**Notes:** 10093

**Reference Type:** Report

**Record Number:** 57

**Author:** SFA

**Year:** 2005

**Title:** Seychelles Fishing Authority Annual Report 2005

**Series Title:** SFA Annual Reports

**Pages:** 83

**Short Title:** Seychelles Fishing Authority Annual Report 2005

**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 4; Helena Francourt; SFA, fishing, fish catch, bycatch, fisheries.

**Notes:** 10094

**Reference Type:** Report

**Record Number:** 56

**Author:** SFA

**Year:** 2006

**Title:** Seychelles Fishing Authority Annual Report 2006

**Series Title:** SFA annual reports

**Institution:** SFA

**Pages:** 73

**Short Title:** Seychelles Fishing Authority Annual Report 2006

**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 4; Helena Francourt; SFA, fishing, fish catch, bycatch, fisheries.

**Notes:** 10095

**Reference Type:** Report

**Record Number:** 67

**Author:** N. J. Shah

**Title:** Marine Science Country Profiles: Seychelles.

**Series Title:** Marine Science Country Profiles.

**Institution:** Intergovernmental Oceanographic Commission & Western Indian Ocean Marine Science Association.

**Document Number:** IOCINCWIO-IV/Inf.6

**Pages:** 31

**Short Title:** Marine Science Country Profiles: Seychelles.

**Keywords:** Seychelles; coastal tourism; inshore fisheries; Coastal protected areas; legislation; 3; Helena Francourt; geography; demography; economy; coastal resources; fisheries; tourism; protected areas; policies

**Notes:** 10096

**Reference Type:** Journal Article

**Record Number:** 82

**Author:** R. Shareef, McAleer, M.

**Year:** 2008

**Title:** Modelling international tourism demand and uncertainty in Maldives and Seychelles: A portfolio approach.

**Journal:** Mathematics and Computers in Simulation

**Pages:** 10

**Short Title:** Modelling international tourism demand and uncertainty in Maldives and Seychelles: A portfolio approach.

**DOI:** 10.1016/j.matcom.2008.01.025

**Keywords:** Seychelles; WIO; Coastal tourism; 4; Helena Francourt; Small island tourism economies; Weekly international tourist arrivals; Uncertainty; Conditional volatility; Country spillover effects.

**Abstract:** Maldives and Seychelles in the Indian Ocean are small island tourism economies (SITES), both of which have relatively small populations, territorial sizes, land area and narrow productive bases. The two SITES are surrounded by vast ocean and have an overwhelming reliance on international tourism for economic development. Variations in international tourist arrivals to these two SITES have been affected by unanticipated oil shocks, natural disasters, crime and global terrorism, among others. An accurate assessment of the variations in international tourist arrivals, particularly the conditional volatility, is essential for policy and marketing purposes. The conditional mean and conditional variance of the weekly international tourist arrivals to Maldives and Seychelles from 1 January 1994 to 31 December 2003 for the five main tourist source countries are modelled. Multivariate models of uncertainty are estimated and tested. An assessment and interpretation of the estimates are made for policy makers and tour operators to reach optimal decisions on the basis of a portfolio approach to international tourism demand. The paper assesses four sets of country spillover effects between Maldives and Seychelles, namely (i) the own country effects for Maldives and Seychelles; (ii) the country spillover effects from the remaining four countries within each of Maldives and Seychelles; (iii) the own country spillover effects between Maldives and Seychelles; and (iv) the cross-country spillover effects between Maldives

and Seychelles. The empirical results for both Maldives and Seychelles are discussed in terms of each of these components.  
**Notes:** 10097

**Reference Type:** Journal Article

**Record Number:** 20

**Author:** C. Sheppard, Dixon, D.J., Gourlay, M., Sheppard, A., Payet, R.

**Year:** 2005

**Title:** Coral mortality increases wave energy reaching shores protected by reef flats: Examples from the Seychelles

**Journal:** Estuarine, coastal and shelf science.

**Volume:** 64

**Pages:** 223-234

**Start Page:** 223

**Type of Article:** Scientific paper

**Short Title:** Coral mortality increases wave energy reaching shores protected by reef flats: Examples from the Seychelles

**Keywords:** Seychelles; tides; sea level; benthic habitat; coastal habitat; 3; Helena Francourt; shores; coral reefs; sea level rise; coral mortality; erosion; wave energy; bleaching; photosynthesis; coral community structure; refuge

**Abstract:** In the granitic Seychelles, many shores and beaches are fringed by coral reef flats which provide protection to shores from erosion by waves. The surfaces of these reef flats support a complex ecology. About 10 years ago their seaward zones were extensively covered by a rich coral growth, which reached approximately to mean low water level, but in 1998 this was largely killed by seawater warming. The resulting large expanses of dead coral skeletons in these locations are now disintegrating, and much of the subsequent modest recovery by new coral recruitment was set back by further mortalities. A mathematical model of wave energy reaching shorelines protected by coral reef flats has been applied to 14 Seychelles reefs. It is derived from equations which predict: (1) the raised water level, or wave set-up, on reef flats resulting from wave breaking, which depends upon offshore wave height and period, depth of still water over the reef flat and the reef crest profile, and (2) the decay of energy from reef edge to shoreline that is affected by width of reef flat, surface roughness, sea level rise and 'pseudo-sea level rise' created by increased depth resulting from disintegration of coral colonies. The model treats each reef as one entity, but because biota and zonation on reef flats are not homogenous, all reefs are divided into four zones. In each, cover by both living and dead biota was estimated for calculation of parameters, and then averaged to obtain input data for the model. All possible biological

factors were taken into account, such as the ability of seagrass beds to grow upwards to match expected sea level rise, reduction in height of the reef flat in relation to sea level as zones of dead corals decay, and the observed 'rounding' of reef crests as erosion removes corals from those areas. Estimates were also made of all these factors for a time approximately a decade ago, representing a time before the mass coral mortality, and for approximately a decade in the future when the observed rapid state of dead coral colony disintegration is assumed to have reached an end point. Results of increased energy over the past decade explain observations of erosion in some sites in the Seychelles. Most importantly, it is estimated that the rise in energy reaching shores protected by fringing reefs will now accelerate more rapidly, such that the increase expected over the next decade will be approximately double than that seen over the past decade.

**Notes:** 10098

**'File' Attachments:**

internal-pdf://sheppard\_et\_al\_seychelles\_wave\_transmissions\_after\_coral\_loss-2787416064/sheppard\_et\_al\_seychelles\_wave\_transmissions\_after\_coral\_loss.pdf

**Reference Type:** Journal Article

**Record Number:** 104

**Author:** C. R. C. Sheppard

**Year:** 2003

**Title:** Predicted recurrences of mass coral mortality in the Indian Ocean.

**Journal:** Nature

**Volume:** 425

**Pages:** 294-297

**Start Page:** 294

**Short Title:** Predicted recurrences of mass coral mortality in the Indian Ocean.

**Keywords:** Seychelles; WIO; ; benthic habitat; invertebrates; climate; ocean temperature; 3; Helena Francourt; bleaching; coral mortality.

**Notes:** 10099

**Reference Type:** Conference Proceedings

**Record Number:** 4

**Author:** D. J. Smith, Etienne, M., Springer, N., Suggett, D.J.

**Year of Conference:** 2008

**Title:** Tolerance, refuge and recovery of coral communities to thermal bleaching: evidence from reefs of the Seychelles.

**Conference Name:** Proceedings of the 11th International Coral Reef Symposium.

**Conference Location:** Fort Lauderdale, Florida.



**Volume:** Session Number 12

**Date:** 7-11 July 2008

**Short Title:** Tolerance, refuge and recovery of coral communities to thermal bleaching: evidence from reefs of the Seychelles.

**Keywords:** Seychelles, invertebrates; benthic habitat; ocean temperature; 3; Helena Francourt; bleaching; photosynthesis; coral community structure; refuge

**Abstract:** Long term viability of coral communities is dictated by their ability to withstand environmental change. Three “mechanisms” exist by which reefs may survive stressful conditions: (1) physiological tolerance, (2) through environmental refuge, and (3) repopulation and growth (recovery) once ambient conditions return. During the 1998 El Niño event, sea surface temperatures (SSTs) around the Seychelles persisted above 32°C and more than 75% of all reefs bleached. Since then, SSTs have not exceeded 30-31°C allowing reefs to recover. Analyses of the size frequency distribution of species-specific colonies in the Seychelles indicated that certain species survived the 1998 event (termed type II corals) whilst other species (termed type I corals) did not but have recruited into the systems post 1998. Experiments confirmed type I and II coral species exhibited alternative physiological characteristics that likely determined the post 1998 community structure. Turbid lagoons containing large colonies of type I species were identified within an oceanic atoll (Desroches) suggesting that these species survived 1998 by recruiting into what have been previously considered sub-optimal habitats and were likely buffered against environmental stress. Consequently, several mechanisms are in active operation that appear to afford Seychelles’ reefs some long term resistance to extreme periods of environmental change.

**Notes:** 10100

**Reference Type:** Conference Proceedings

**Record Number:** 10

**Author:** D. J. Smith, Jompa, J., Pretty, J., Etienne, M., Spring, N., Suggett, D.J.

**Year of Conference:** 2008

**Title:** Using Coral Reefs to Examine the Threats of Climate Change to Marine Biodiversity

**Editor:** D. J. Smith, Jompa, J., Pretty, J., Etienne, M., Spring, N., Suggett, D.J.

**Conference Name:** The Proceedings of the International Symposium on Biological Diversity

**Short Title:** Using Coral Reefs to Examine the Threats of Climate Change to Marine Biodiversity

**Keywords:** Seychelles; invertebrates; benthic habitat; ocean temperature; 3; Helena Francourt; bleaching; photosynthesis; coral community structure

**Abstract:** Climate change is one of the biggest threats facing the future sustainability of the Earth's biodiversity and natural resource. There is overwhelming evidence suggesting that key climate variables such as temperature, solar irradiance, precipitation, storm intensity and aquatic acidification are altering biological systems. The evidence supporting the fact that climate change is predominantly anthropogenically driven is also so significant that the majority of scientists, conservation managers and policy makers now recognise and admit that human activities are changing the world's climate. Marine ecosystems, like any other, will be detrimentally impacted. Coral reefs are the most diverse marine ecosystem, support up to 1 billion people, are sensitive to environment stress (e.g. El Niño Southern Oscillation (ENSO)

events) and are charismatic systems that can be used to demonstrate how climate change will alter the planet's biological, social and economic systems. Within this paper we discuss the rates of change in the key climate variables, and how these variables will impact coral reef systems. In particular we focus on the well known phenomena of coral bleaching which represents a serious threat to coral reefs around the world. We have used past ENSO events as a natural experiment to determine how climate change may affect future reef systems. We also demonstrate how we have used a combination of experimentation and field studies to identify the causes of coral bleaching and the various levels of tolerance that natural systems have. We conclude by identifying the need for inclusive international collaboration to address global issues. We also stress how essential it is for researchers to pool resources and place their findings into a management framework that will enable decision and policy makers to make informed decisions. Such actions are required to ensure that the earth's ecosystems have the best possible chance to continue to function during an era of unprecedented climate change that could otherwise catastrophically affect natural systems and people at every level of society.

**Notes:** 10101

**Reference Type:** Book Section

**Record Number:** 106

**Author:** D. Souter, Obura, D., Wilhelmsson, D., Sheppard, C., Richmond, M., Linden, O., Payet, R., Bijoux, J.

**Year:** 2005

**Title:** Status of Cosmoledo Atoll, Southern Seychelles, four years after bleaching-related mass coral mortality.

**Editor:** D. Souter, Linden, O.

**Book Title:** Coral reef degradation in the Indian Ocean- Status Report 2005

**City:** Kalmar, Sweden

**Publisher:** CORDIO

**Pages:** 146-163

**Series Editor:** CORDIO

**Translator:** U. o. K. Department of Biology and Environmental Science

**Short Title:** Status of Cosmoledo Atoll, Southern Seychelles, four years after bleaching-related mass coral mortality.

**Keywords:** Seychelles; invertebrates; fish; benthic habitat; ocean temperature; 3; Helena Francourt; bleaching; Cosmoledo; coral mortality

**Abstract:** Coral and fish community structure was examined at five permanent monitoring sites and several rapid assessment sites on the leeward reef slope and in the lagoon of Cosmoledo Atoll in

the southern Seychelles in order to assess its current status and establish a long term monitoring and conservation programme. The atoll and reef structure of Cosmoledo are characteristic of

atoll reefs, with a steep reef slope below 25–30 m, a central lagoon that is connected to the surrounding ocean by two major passes through the reef rim, and several islands distributed

around the atoll rim. Almost 200 species of coral were recorded during the expedition. Coral communities were severely affected by the El Niño of 1998 showing near 100% mortality in the lagoon and on reef slopes to a depth of 8 m. Deeper reef slopes (>15 m) supported 20–25% live coral cover, which decreased to 1–5% at depths <10 m. The average number of coral recruits ranged between 5 and 6.7 m<sup>-2</sup> on the slope and 6.8 m<sup>-2</sup> in the lagoon. On reef slopes, recruitment was greater at 20 m than 10m. The species composition of recruits differed from the prebleaching adult community indicating that a shift in the species composition of the coral community is underway. In shallow waters on the reef slope, pocilloporids dominated recruit assemblages while faviids were most abundant at depth. In the lagoon, *Porites* and *Fungia* recruits were most abundant while the previously dominant acroporids were rare. More than 200 species of fish were recorded. Acanthurids were common, large and medium sized serranids were recorded at all sites and lutjanids and lethrinids were frequently sighted. The obligate corallivores *Chaetodon trifascialis* and *C. trifasciatus* were rare even where coral cover was greater. Not a single shark was sighted. While recovery from coral bleaching impacts is evident, especially below 10 m, recovery has been slow, particularly in shallow water (<5 m).

**Notes:** 10102

**Research Notes:** Book available at SCMRT (last viewed 5/11/2009)

**Reference Type:** Journal Article

**Record Number:** 107

**Author:** M. D. Spalding, Jarvis, G.E.

**Year:** 2002

**Title:** The impact of the 1998 coral mortality on reef fish communities in the Seychelles.

**Journal:** Marine Pollution Bulletin.

**Volume:** 44

**Pages:** 309-321

**Start Page:** 309

**Short Title:** The impact of the 1998 coral mortality on reef fish communities in the Seychelles.

**Keywords:** Seychelles; invertebrates; fish; benthic habitat; ocean temperature; 5; Helena Francourt; coral bleaching; 1998.

**Abstract:** Coral reef fish communities in the Seychelles are highly diverse and remain less affected by the direct impacts of human activities than those on many other coral reefs in the Indian Ocean. These factors make them highly suitable for a detailed survey of the impacts of the 1998 mass coral mortality, which devastated the coral faunas of the region. Using underwater visual census (UVC) techniques, fish communities were sampled in three localities in the southern Seychelles and one locality in the northern (granitic) Seychelles. Initial surveys were undertaken from the latter site in 1997. Surveys were undertaken at all sites during the coral bleaching episode in 1998 prior to any major changes in the reef fish communities. Repeat surveys were undertaken in 1999 one year after the coral mortality. Over 250 fish species were sampled from 35 families. Results suggest that changes in the overall fish community structures are not great, despite massive changes in the benthic cover. Significant changes have been observed in a number of individual species. These include those most heavily dependent on live coral cover for shelter or sustenance. Future potential changes are discussed, and potential

management interventions are considered.

**Notes:** 10103

**Reference Type:** Journal Article

**Record Number:** 108

**Author:** T. Spencer, Teleki, K.A., Bradshaw, C., Spalding, M.D.

**Year:** 2000

**Title:** Coral bleaching in the Southern Seychelles during the 1997-1998 Indian Ocean warm event.

**Journal:** Marine Pollution Bulletin.

**Volume:** 40

**Issue:** 7

**Pages:** 569-586

**Start Page:** 569

**Short Title:** Coral bleaching in the Southern Seychelles during the 1997-1998 Indian Ocean warm event.

**Keywords:** Seychelles; invertebrates; benthic habitat; ocean temperature; 3; Helena Francourt; ENSO; El Nino; sea surface temperature; ocean warming; global environmental change; Indian Ocean.

**Abstract:** Coral bleaching shows complex spatial-temporal dynamics at several scales. Recent developments in ocean surface remote sensing technologies allow for both a better appreciation of these dynamics and an opportunity to place more local studies of coral bleaching and bleaching-related coral mortality into wider oceanographic and biogeographic contexts. Coral bleaching is described at four coral reefs in the southern Seychelles (sea area  $6\pm 10^{\circ}\text{S}$   $45\pm 54^{\circ}\text{E}$ ) during March±May 1998. Bleaching intensity varied between locations, between environments at the within-reef scale, and between coral growth forms. These data are compared with bleaching reports and sea surface temperature statistics for eight further stations in the western Indian Ocean to establish a link between bleaching and the unprecedented warming of the Indian Ocean during 1997/98. Implications for long-term reef history, and coral reef futures, in the western Indian Ocean are discussed.

**Notes:** 10104

**Reference Type:** Journal Article

**Record Number:** 158

**Author:** J. D. Stevens

**Year:** 1984

**Title:** Life history and ecology of sharks at Aldabra Atoll, Indian Ocean.

**Journal:** Proc. R. Soc. Lond. B.

**Volume:** 222

**Pages:** 79-106

**Short Title:** Life history and ecology of sharks at Aldabra Atoll, Indian Ocean.

**Keywords:** Seychelles; fish; Coastal protected areas; Special management; 3; Helena Francourt; sharks; aldabra; ecology; life history

**Notes:** 10105

**Reference Type:** Journal Article

**Record Number:** 28

**Author:** D. R. Stoddart, Cowx, D., Peet, C., Wilson, J.R.

**Year:** 1982

**Title:** Tortoises and tourists in the Western Indian Ocean: The Curieuse experiment.

**Journal:** Biological Conservation

**Volume:** 24

**Pages:** 67-80

**Short Title:** Tortoises and tourists in the Western Indian Ocean: The Curieuse experiment.

**Keywords:** Seychelles; reptiles; coastal tourism; coastal protected areas; special management; 3; Helena Francourt; Giant Tortoises, Curieuse, Aldabra, Tourism

**Abstract:** A colony of giant tortoises *Geochelone gigantea* from Aldabra Atoll was established in 1978 on the island of Curieuse in the granitic Seychelles, where tortoises have long been extinct. Ninety-five were landed in April 1978 and 78 in April 1980. The animals have shown considerable increases in weight, and the first hatchling was found in February 1980. The main purpose of the colony is to provide a tourist attraction within easy reach of Mahe and deflect tourist pressure from Aldabra: at the same time the colony has considerable scientific potential. The environment and history of Curieuse are reviewed in the light of criteria initially established for the choice of an island for the project, and the future of the experiment is discussed.

**Notes:** 10106

**Reference Type:** Book Section

**Record Number:** 135

**Author:** D. R. Stoddart

**Year:** 1984

**Title:** Scientific studies in the Seychelles

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** The Hague: Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 1-16

**Chapter:** 1

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Scientific studies in the Seychelles

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; benthic habitat; coastal habitat; invertebrates; fish; mammals; reptiles;

coastal protected areas; special management; 4; Helena Francourt; biogeography; ecology

**Notes:** 10107

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Book Section

**Record Number:** 138

**Author:** D. R. Stoddart

**Year:** 1984

**Title:** Coral reefs of the Seychelles and adjacent regions.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 63-82

**Chapter:** 4

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Coral reefs of the Seychelles and adjacent regions.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; WIO; Benthic habitat; invertebrates; fish; Coastal protected areas; 3; Helena Francourt; coral reef.

**Notes:** 10108

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Book Section

**Record Number:** 146

**Author:** D. R. Stoddart, Fosberg, F.R.

**Year:** 1984

**Title:** Vegetation and floristics of the western Indian Ocean coral islands.

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 221-238

**Chapter:** 12

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Vegetation and floristics of the western Indian Ocean coral islands.

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; WIO; coastal habitat; Primary production; Coastal plants; Special management; 3; Helena Francourt; vegetation; Flora, coralline, coastal plants

**Notes:** 10109

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Journal Article

**Record Number:** 21

**Author:** C. Swabey

**Year:** 1970

**Title:** The endemic flora of the Seychelles Islands and its conservation.

**Journal:** Biological Conservation

**Volume:** 2

**Issue:** 3

**Pages:** 171-177

**Start Page:** 171

**Short Title:** The endemic flora of the Seychelles Islands and its conservation.

**Keywords:** Seychelles; WIO; coastal habitat; Primary production; Coastal plans; coastal protected area; Special management; 3; Helena Francourt; coco de mer; endemic; flora; Seychelles; Curieuse.

**Abstract:** The flora of the granitic islands of the Seychelles includes the Coco-de-mer or Double Coconut (*Lodoicea maldivica*) and many other endemic species of exceptional interest, a few of which are briefly described. The indigenous forests have been largely destroyed since the islands were first settled in 1770, and many unique species of plants and animals are in danger of extinction. An outline is given of the probable composition of the aboriginal vegetation, of its subsequent history, and of the almost complete failure of attempts at conservation. Action is urged to implement proposals for the establishment of nature reserves to save at least some relict fragments of the natural vegetation before it is too late.

**Notes:** 10110

**Reference Type:** Report

**Record Number:** 119

**Author:** J. Tاملندر

**Year:** 2007 Dec

**Title:** Detecting Marine Bioinvasions on Small Islands in the Indian Ocean: Baseline Survey of Alien Invasive Species on Coral Reef Communities in the Chagos Archipelago (British Indian Ocean Territories) and Aldabra Group, Seychelles.

**Series Editor:** I. G. M. Programme

**Series Title:** Second progress report

**Pages:** 7

**Short Title:** Detecting Marine Bioinvasions on Small Islands in the Indian Ocean: Baseline Survey of Alien Invasive Species on Coral Reef Communities in the Chagos Archipelago (British Indian Ocean Territories) and Aldabra Group, Seychelles.

**Keywords:** Seychelles; WIO; exotics; benthic habitat; Special management; coastal protected areas; 4; Helena Francourt; marine bioinvasion; invasive species, marine, introduced, alien,

invasive

**Notes:** 10111

**Reference Type:** Journal Article

**Record Number:** 45

**Author:** J. D. Taylor

**Year:** 1968

**Title:** Coral Reef and Associated Invertebrate Communities (Mainly Molluscan) Around Mahe, Seychelles

**Journal:** Philosophical Transactions of the royal Society of London. Series B, Biological Sciences.

**Volume:** 254

**Issue:** 793

**Pages:** 129-206

**Start Page:** 129

**Epub Date:** Sep 26 1968

**Short Title:** Coral Reef and Associated Invertebrate Communities (Mainly Molluscan) Around Mahe, Seychelles

**Keywords:** Seychelles; invertebrates; benthic habitat; special management; 3; Helena Francourt; mollusca; invertebrates; epifauna; algae; bivalves; corals; crustacea; echinoderms; bivalves; polychaetes

**Notes:** 10112

**URL:** <http://www.jstor.org>

**Reference Type:** Report

**Record Number:** 134

**Author:** K. Teleki, Downing, N., Stobart, B., Buckley, R.

**Year:** 2000

**Title:** The status of Aldabra Atoll coral reefs and fishes following the 1998 coral bleaching event.

**Series Title:** Shoals Publication No. P006.

**Institution:** Shoals of Cparicorn Programme

**Publisher:** C. C. R. Unit

**Short Title:** The status of Aldabra Atoll coral reefs and fishes following the 1998 coral bleaching event.

**Keywords:** Seychelles; invertebrates; fish; benthic habitat; coastal protected areas; special management; 3; Helena Francourt; Aldabra; coral reefs; coral bleaching

**Notes:** 10113

**Research Notes:** Hard copy available at SCMRT (last viewed on 5th Nov 2009)

**Reference Type:** Journal Article

**Record Number:** 76

**Author:** E. A. Titlyanov, Littler, M.M., Littler, D.S.



**Year:** 1992

**Title:** Chapter 1: Introduction to the Soviet-American expedition to the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 365

**Pages:** 1-17

**Short Title:** Chapter 1: Introduction to the Soviet-American expedition to the Seychelles Islands.

**Keywords:** Seychelles; invertebrates; Fish; Primary production; micro; Benthic habitat; currents; Benthic production; coastal protected area; 3; Helena Francourt; expedition.

**Abstract:** The First Soviet-American Expedition in Marine Biology to the Seychelles Islands was organized by the Institute of Marine Biology, Far East Branch of the USSR Academy of Sciences, at the

request of the Seychelles Government. The Republic of the Seychelles Islands sought information on the marine resources and productivity of benthic and planktonic communities on the Seychelles Bank. After discussing the program of development of the Republic of the Seychelles Islands with the Deputy Prime Minister, the following research objectives were established for the expedition:

- 1) To study the benthic marine biota and fouling processes of the Seychelles Islands, which represents a poorly investigated region of the Indian Ocean.
- 2) To provide the first analyses of the species composition of algal communities for several remote island groups (Farquhar Atoll, Coetivy Atoll, Cosmoledo Atoll, Amirantes Group) and to supplement previous knowledge on the algae of Aldabra Atoll, Mahe Island and Praslin Island.
- 3) To study the distribution of autotrophic organisms over the various reef systems and determine the depth ranges of algae, seagrasses and corals.
- 4) To evaluate the common algal and seagrass resources in the area of study, particularly species of commercial interest.
- 5) To estimate the production potential of the major producers of organic matter on Seychelles reefs; i.e., benthic macroalgae, seagrasses, reef building corals and phytoplankton.
- 6) To assess the prevalent environmental parameters of the various island groups studied: e.g., optical characteristics of the water, seawater temperatures, nutrient contents, oxygen levels, pH and current velocities.
- 7) To investigate the adaptations of photosynthetic organisms to light, nutrients, temperature and water motion.
- 8) To study nitrogen and phosphorus metabolism in macrophytes and nitrogen cycling in bottom sediments on island coasts, lagoons, channels and reef-flats.

Altogether, the expedition examined 11 Seychelles island groups, including the Amirantes Group, Coetivy Atoll, Farquhar Atoll, Aldabra Atoll, Astove Atoll, Cosmoledo Atoll, Providence, Mahe, Praslin, La Digue, Desroches, African Banks and St. Joseph Atoll.

**Notes:** 10114

**Reference Type:** Journal Article

**Record Number:** 87

**Author:** E. A. Titlyanov, Bil', K.Y., Kolmakov, P.V., Lapshina, A.A., Parnik, T.R.

**Year:** 1992

**Title:** Chapter 9: Photosynthesis in common macrophyte species in the intertidal and upper subtidal zones of the Seychelles Islands.

**Journal:** Atoll Research Bulletin

**Volume:** 373

**Pages:** 1-36

**Short Title:** Chapter 9: Photosynthesis in common macrophyte species in the intertidal and upper subtidal zones of the Seychelles Islands.

**Keywords:** Seychelles; Primary production; Benthic habitat; Benthic production; 3; Helena Francourt

**Notes:** 10115

**Reference Type:** Journal Article

**Record Number:** 89

**Author:** E. A. Titlyanov, Leletkin, V.A., Bil', K.Y., Kolmakov, P.V., Nechai, E.G.

**Year:** 1992

**Title:** Chapter 11: Light and temperature dependence of oxygen exchange, carbon assimilation and primary production in *Thalassodendron ciliatum* blades.

**Journal:** Atoll Research Bulletin

**Volume:** 375

**Pages:** 1-20

**Short Title:** Chapter 11: Light and temperature dependence of oxygen exchange, carbon assimilation and primary production in *Thalassodendron ciliatum* blades.

**Keywords:** Seychelles; Primary production; Benthic production; Nutrients; inshore; 3; Helena Francourt

**Notes:** 10116

**Reference Type:** Book Section

**Record Number:** 137

**Author:** R. P. D. Walsh

**Year:** 1984

**Title:** Climate of the Seychelles

**Editor:** D. R. Stoddart

**Book Title:** Biogeography and ecology of the Seychelles Islands

**Publisher:** Dr. W. Junk Publishers

**Volume:** 55

**Pages:** 39-62

**Chapter:** 3

**Series Editor:** H. J. Dumont

**Series Title:** Monographie Biologicae

**Short Title:** Climate of the Seychelles

**ISBN:** 90-6193-107-X

**Keywords:** Seychelles; climate; 5; Helena Francourt

**Notes:** 10117

**Research Notes:** Hard copy available at SCMRT (last viewed on Nov 5th 2009)

**Reference Type:** Government Document

**Record Number:** 49

**Author:** B. Wendling, Engelhardt, U., Adam, P.A., Rosine, G., Alcindor, R., Zialor, V., Louange, A.

**Year:** 2002

**Title:** Bleaching event in the inner granitic islands of Seychelles in April-June 2002, impact on branch coral recruits (*Acropora* spp., *Pocillopora* spp., *Faviidae* spp.)

**Department:** M. o. Environment

**City:** Mahe

**Pages:** 9

**Section:** Conservation section

**Keywords:** Seychelles; climate change; ocean temperature; invertebrates; 3; Helena Francourt; coral bleaching; 2002; Acropora; Pocillopora; Faviidae; coral recruit

**Notes:** 10118

**Reference Type:** Report

**Record Number:** 13

**Author:** B. Wendling, Engelhardt, U., Adam, P.A., Alcindor, R., Louange, A., Rosine, G., Zialor, V.

**Year:** 2004

**Title:** Pilot study of management of black-spined sea urchin populations around the granitic islands of the Seychelles with an objective of restoration of the coral reef ecosystem: Impacts on recent hard coral recruits (November 2001 – January 2003).

**Series Title:** Global Environment Facilities: SEYMEMP

**Pages:** 30

**Short Title:** Pilot study of management of black-spined sea urchin populations around the granitic islands of the Seychelles with an objective of restoration of the coral reef ecosystem: Impacts on recent hard coral recruits (November 2001 – January 2003).

**Keywords:** Seychelles; Benthic habitat; invertebrates; Special management; 3; Helena Francourt; sea urchin; coral recruit; granitic; restoration

**Notes:** 10119

**Reference Type:** Journal Article

**Record Number:** 84

**Author:** J. P. Wise Sr, Payne, R., Wise, S.S., LaCerte, C., Wise, J., Gianios Jr, C., Thompson, W.D., Perkins, C., Zheng, T., Zhu, C., Benedict, L., Kerr, I.

**Year:** 2009

**Title:** A global assessment of chromium pollution using sperm whales (*Physeter macrocephalus*) as an indicator species

**Journal:** Chemosphere

**Short Title:** A global assessment of chromium pollution using sperm whales (*Physeter macrocephalus*) as an indicator species

**DOI:** 10.1016/j.chemosphere.2009.02.044

**Keywords:** Seychelles; WIO; offshore; mammals; Special management; 4; Helena Francourt; Sperm whale; Chromium; Chromate; Tissue levels; Marine mammal; *Physeter macrocephalus*

**Abstract:** Chromium (Cr) is a well-known human carcinogen and a potential reproductive toxicant, but its contribution to ocean pollution is poorly understood. The aim of this study was to provide a global baseline for Cr as a marine pollutant using the sperm whale (*Physeter macrocephalus*) as an indicator species. Biopsies were collected from free-ranging whales around the globe during the voyage of the research vessel The Odyssey. Total Cr levels were measured in 361 sperm whales collected from 16 regions around the globe detectable levels ranged from 0.9 to 122.6 lg Cr g tissue<sup>-1</sup> with a global mean of  $8.8 \pm 0.9$  lg g<sup>-1</sup>. Two whales had undetectable levels. The highest levels were found in sperm whales sampled in the waters near the Islands of Kiribati in the Pacific (mean =  $44.3 \pm 14.4$ ) and the Seychelles in the Indian Ocean (mean =  $19.5 \pm 5.4$  lg g<sup>-1</sup>). The lowest mean levels were found in whales near the Canary Islands (mean =  $3.7 \pm 0.8$  lg g<sup>-1</sup>) and off of the coast of Sri Lanka (mean =  $3.3 \pm 0.4$  lg g<sup>-1</sup>). The global mean Cr level in whale skin was 28-times higher than mean Cr skin levels in humans without occupational exposure. The whale levels were more similar to levels only observed previously in human lung tissue from workers who died of Cr-induced lung cancer. We conclude that Cr pollution in the marine environment is significant and that further study is urgently needed.

**Notes:** 10120

**Reference Type:** Journal Article

**Record Number:** 6

**Author:** L. Wood

**Year:** 2004

**Title:** Motives for Poaching in Marine Protected Areas in the Seychelles

**Journal:** Western Indian Ocean J. Mar. Sci..

**Volume:** 3

**Issue:** 2

**Pages:** 199-208

**Start Page:** 199

**Type of Article:** Scientific paper

**Short Title:** Motives for Poaching in Marine Protected Areas in the Seychelles

**Keywords:** Seychelles; marine protected areas; inshore fisheries; admin-Sea; legislation; Govt authorities; Special management; MCS; 4; Helena Francourt; MPA; poaching; fisheries.

**Abstract:** Motives for non-compliance with no-take regulations in the eight marine protected areas (MPAs) of the Inner Islands of the Republic of Seychelles were investigated using semistructured

interviews with fishers. Discriminant function analysis (DFA) of responses to questions was used to classify known poachers and non-poachers to an accuracy of 94%. This classification procedure can be used to predict the poaching status of fishers of unknown

poaching

status, based on their responses to a standard set of questions. Although these results are preliminary, they suggest that DFA represents a powerful tool in the investigation of sensitive issues such as illegal fishing, as its use of responses to a combination of relatively innocuous questions allows the prediction of poaching activity to a high level of accuracy without requiring a direct admission to poaching. Qualitative data also presented here support these results and offer further insights into the biological, economic and socio-political motives for poaching.

**Notes:** 10121

**Reference Type:** Journal Article

**Record Number:** 60

**Author:** V. E. Wood

**Year:** 1986

**Title:** Breeding success of Hawksbill turtles *Eretmochelys imbricata* at Cousin Island, Seychelles and the implications for their conservation.

**Journal:** Biological Conservation

**Volume:** 37

**Pages:** 321-332

**Start Page:** 321

**Short Title:** Breeding success of Hawksbill turtles *Eretmochelys imbricata* at Cousin Island, Seychelles and the implications for their conservation.

**Keywords:** Seychelles; reptiles; coastal protected areas; Special management; MCS; 3; Helena Francourt; Hawksbill turtle; *Eretmochelys imbricata*; breeding success

**Abstract:** The Cousin Island population of hawksbill turtles *Eretmochelys imbricata* has been studied for ten years. Each season new (untagged) and return (tagged) turtles are seen on the beaches; having once nested successfully these females are apparently faithful to the island. Most of the females breeding in the 1981-82 and 1982-83 seasons were intercepted and 144 nests were followed through to the emergence of young. Egg losses were mainly attributable to crab predation. Individual females laid up to six times (mean 3.1 times) in a season; clutch size and hatchling weight declined significantly in their later nests. Hatching and emergence success were high, especially in early nests; late in the season proportionally more developed embryos died. It is suggested that the completion of early, more successful and more productive nests could be safeguarded by delaying the start of the turtle hunting season.

**Notes:** 10122

**Reference Type:** Journal Article

**Record Number:** 85

**Author:** A. Y. Zvyagintsev, Ivin, V.V.

**Year:** 1992

**Title:** Chapter 6: Fouling communities of the Seychelles islands.

**Journal:** Atoll Research Bulletin

**Volume:** 370

**Pages:** 1-18

**Short Title:** Chapter 6: Fouling communities of the Seychelles islands.

**Keywords:** Seychelles; micro; invertebrates; 3; Helena Francourt; fouling, hull, invasive, alien.

**Notes:** 10123

**Reference Type:** Journal Article

**Record Number:** 165

**Author:** K. K. Aleem

**Year:** 1984

**Title:** Distribution and ecology of seagrass communities in the Western Indian Ocean.

**Journal:** Deep-Sea Research

**Volume:** 31

**Issue:** 6-8

**Pages:** 919-933

**Short Title:** Distribution and ecology of seagrass communities in the Western Indian Ocean.

**Keywords:** Seychelles; WIO; Primary production; benthic habitat; inshore; 5; Helena Francourt

**Notes:** 10124

**Reference Type:** Journal Article

**Record Number:** 166

**Author:** Aumeeruddy R.

**Year:** 1999

**Title:** Perspectives et Développement de l'Aquaculture aux Seychelles.

**Journal:** Journées Aquacoles de l'Océan Indien

**Pages:** 220

**Short Title:** Perspectives et Développement de l'Aquaculture aux Seychelles.

**Keywords:** Seychelles; fish; invertebrates; inshore; mariculture; Coastal plans; 5; Helena Francourt; aquaculture.

**Notes:** 10125

**Reference Type:** Report

**Record Number:** 167

**Author:** R. Aumeeruddy, Skewes, T., Dorizo, J., Carocci, F., Coeur de Lion, F., Harris, A., Henriette, C. & Cedras, M.

**Year:** 2005, Nov

**Title:** Resource assessment and management of the Seychelles sea cucumber fishery.

**Institution:** FAO

**Document Number:** Project Number: TCP/Seychelles/2902(A)

**Pages:** 49

**Short Title:** Resource assessment and management of the Seychelles sea cucumber fishery.

**Keywords:** Seychelles; invertebrates; inshore fisheries; Special management; 5; Helena

Francourt; sea cucumber; management; resource assessment.

**Notes:** 10126

**Reference Type:** Journal Article

**Record Number:** 168

**Author:** P. Bach

**Year:** 1992

**Title:** Yield and exploitation level of demersal and semi-pelagic resources exploited by the Seychelles artisanal fisheries on the Mahe plateau.

**Journal:** Cybium

**Volume:** 16

**Pages:** 345-360

**Short Title:** Yield and exploitation level of demersal and semi-pelagic resources exploited by the Seychelles artisanal fisheries on the Mahe plateau.

**Keywords:** Seychelles; fish; inshore fisheries; 5; Helena Francourt; yield; exploitation; resources; artisanal fisheries.

**Notes:** 10127

**Reference Type:** Journal Article

**Record Number:** 169

**Author:** B. H. Baker

**Year:** 1963

**Title:** Geology and mineral resources of the Seychelles archipelago.

**Journal:** Geol. Surv. Kenya. Mem.

**Volume:** 3

**Pages:** 140

**Short Title:** Geology and mineral resources of the Seychelles archipelago.

**Keywords:** Seychelles; Geo; minerals; 5; Helena Francourt.

**Notes:** 10128

**Reference Type:** Journal Article

**Record Number:** 170

**Author:** L. T. Ballance, Pitman, R.L.

**Year:** 1998

**Title:** Cetacean of the Western tropical Indian Ocean: distribution, relative abundance, and comparisons with cetacean communities of two other tropical ecosystems.

**Journal:** Marine Mammal Science

**Volume:** 14

**Issue:** 3

**Pages:** 429-459

**Short Title:** Cetacean of the Western tropical Indian Ocean: distribution, relative abundance,

and comparisons with cetacean communities of two other tropical ecosystems.

**Keywords:** Seychelles; WIO; mammals; MCS; 5; Helena Francourt; Cetacean; abundance; distribution.

**Notes:** 10129

**Reference Type:** Report

**Record Number:** 171

**Author:** P. B. Best

**Year:** 1983

**Title:** Sperm whale stock assessment and the relevance of historical whaling records.

**Series Title:** Report of the International Whaling Commission

**Volume:** Special Issue 5

**Pages:** 41-55

**Short Title:** Sperm whale stock assessment and the relevance of historical whaling records.

**Keywords:** Seychelles; WIO; mammals; offshore fisheries; 5; Helena Francourt; Sperm whale; stock assessment; whaling; records.

**Notes:** 10130

**Reference Type:** Journal Article

**Record Number:** 172

**Author:** C. J. R. Braithwaite

**Year:** 1971

**Title:** Seychelles reefs: structure and development.

**Journal:** symposium of the Zoological Society of London.

**Volume:** 28

**Pages:** 39-63

**Short Title:** Seychelles reefs: structure and development.

**Keywords:** Seychelles; Benthic habitat; invertebrates; marine protected areas; 5; Helena Francourt; coral reefs

**Notes:** 10130

**Reference Type:** Book

**Record Number:** 173

**Author:** A. E. Burger, Lawrence, A.D.

**Year:** 2003

**Title:** Seabird monitoring handbook for the Seychelles.

**Series Editor:** N. Seychelles

**Series Title:** 2nd ed.

**Short Title:** Seabird monitoring handbook for the Seychelles.

**ISBN:** 99931-53-10-9

**Keywords:** Seychelles; birds; 5; Helena Francourt



**Notes:** 10131

**Reference Type:** Conference Proceedings

**Record Number:** 174

**Author:** S. D. Chang-Send

**Year of Conference:** 2007

**Title:** Climate Variability and Climate Change Assessment for the Seychelles.

**Conference Name:** Second National Communication (SNC), Under the United Nation's Framework of the Convention of Climate Change (UNFCCC).

**Short Title:** Climate Variability and Climate Change Assessment for the Seychelles.

**Keywords:** Seychelles; Climate change; Special management; 5; Helena Francourt

**Notes:** 10132

**Reference Type:** Journal Article

**Record Number:** 175

**Author:** A. Fonteneau, Lucas, V., Tewkai, E., Delgado, A and Demarcq H.

**Year:** 2008

**Title:** Mesoscale exploitation of a major tuna concentration in the Indian Ocean.

**Journal:** Aquatic Living Resources.

**Volume:** 21

**Pages:** 109-121

**Short Title:** Mesoscale exploitation of a major tuna concentration in the Indian Ocean.

**Keywords:** Seychelles; WIO; Fish; inshore fisheries; Continental shelf; 5; Helena Francourt

**Notes:** 10133

**Reference Type:** Journal Article

**Record Number:** 176

**Author:** J. Frazier

**Year:** 1976

**Title:** Report on sea turtles in the Seychelles area.

**Journal:** Journal of Marine Biological Association of India.

**Volume:** 18

**Issue:** 2

**Pages:** 1-63

**Short Title:** Report on sea turtles in the Seychelles area.

**Keywords:** Seychelles; reptiles; Special management; 5; Helena Francourt

**Notes:** 10134

**Reference Type:** Journal Article

**Record Number:** 177

**Author:** G. P. Gallienne, Conway, D.V.P., Robinson, J., Naya, N., William, J.S., Lynch, T. and Meunier, S.

**Year:** 2004

**Title:** Epipelagic mesozooplankton distribution and abundance over the Mascarene Plateau and Basin, south-western Indian Ocean.

**Journal:** Journal of the Marine Biological Association of the United Kingdom.

**Volume:** 84

**Issue:** 4321-4328

**Short Title:** Epipelagic mesozooplankton distribution and abundance over the Mascarene Plateau and Basin, south-western Indian Ocean.

**Keywords:** Seychelles; WIO; micro; invertebrates; 5; Helena Francourt

**Notes:** 10135

**Reference Type:** Journal Article

**Record Number:** 179

**Author:** T. S. H. Gibson.

**Year:** 1979

**Title:** Green turtle (*Chelonia mydas* (L.)) nesting activity at Aldabra Atoll.

**Journal:** Phil. Trans. Roy. Soc. London, Series B.

**Volume:** 286

**Pages:** 255-263

**Short Title:** Green turtle (*Chelonia mydas* (L.)) nesting activity at Aldabra Atoll.

**Keywords:** Seychelles; reptiles; coastal habitat; Coastal protected area; Special management; 5; Helena Francourt; Green turtle; *Chelonia mydas*.

**Notes:** 10136

**Reference Type:** Journal Article

**Record Number:** 197

**Author:** E. M. Grandcourt, Hecht. T., Booth, A. J. and Robinson, S. J.

**Year:** 2008

**Notes:** 10137

**Reference Type:** Journal Article

**Record Number:** 180

**Author:** S. Jaquemet, Le Corre, M. and Quartly, G.D.,

**Year:** 2007

**Title:** Ocean control of the breeding regime of the sooty terns in the South-West Indian Ocean.

**Journal:** Deep Sea Research .

**Volume:** 1

**Issue:** 54

**Pages:** 130-142

**Short Title:** Ocean control of the breeding regime of the sooty terns in the South-West Indian Ocean.

**Keywords:** Seychelles; WIO; birds; Coastal habitat; special management; 5; Helena Francourt; sooty tern, *Sterna fuscata*, breeding.

**Notes:** 10137

**Reference Type:** Report

**Record Number:** 181

**Author:** R. A. Jemielita, Belle, E., Joseph, P., Plummer, P.

**Year:** 1995

**Title:** Exploitation of granite: a report on present quarrying activity and future quarrying potential on Seychelles.

**City:** Seychelles

**Institution:** Seychelles National Oil Company

**Short Title:** Exploitation of granite: a report on present quarrying activity and future quarrying potential on Seychelles.

**Keywords:** Seychelles; Geo; minerals; mineral extraction; 5; Helena Francourt; granite; quarry

**Notes:** 10138

**Reference Type:** Book Section

**Record Number:** 182

**Author:** S. Jennings, Marshall, S., Cuet, P., Naim, O.

**Year:** 1999

**Title:** The Seychelles.

**Editor:** T. R. McClanahan, Sheppard, C.S., and Obura, D.O.

**Book Title:** Coral reefs of the Western Indian Ocean: their Ecology and Conservation.

**City:** New York

**Publisher:** Oxford University Press.

**Pages:** 399-432

**Short Title:** The Seychelles.

**Keywords:** Seychelles; benthic habitat; invertebrates; 5; Helena Francourt; coral reefs; Ecology; Conservation

**Notes:** 10139

**Reference Type:** Report

**Record Number:** 183

**Author:** C. C. Mees, Shotton, R., & Marguerite, M.

**Year:** 1998

**Title:** An inshore fisheries management strategy for the Seychelles.

**Series Title:** Final Report of Project No. FAO/TCP/SEY/6713(A),

**City:** Victoria & Rome.

**Institution:** Seychelles Fishing Authority & Food and Agriculture Organisation  
**Short Title:** An inshore fisheries management strategy for the Seychelles.  
**Keywords:** Seychelles; Fish; inshore fisheries; Special management; 5; Helena Francourt.  
**Notes:** 10140

**Reference Type:** Journal Article  
**Record Number:** 184  
**Author:** G. Meyers, McIntosh, P., Pigot, L. and Pook, M.  
**Year:** 2007  
**Title:** The years of El Niño, La Niña, and interactions with the Tropical Indian Ocean.  
**Journal:** Journal of Climate.  
**Volume:** 20  
**Pages:** 2872-2880  
**Short Title:** The years of El Niño, La Niña, and interactions with the Tropical Indian Ocean.  
**Keywords:** Seychelles; WIO; Climate; ocean temperature; 5; Helena Francourt; El Nino; La Nina  
**Notes:** 10141

**Reference Type:** Journal Article  
**Record Number:** 185  
**Author:** J. A. Mortimer  
**Year:** 1985  
**Title:** Recovery of green turtles on Aldabra.  
**Journal:** Oryx  
**Volume:** 19  
**Issue:** 3  
**Pages:** 146-150  
**Short Title:** Recovery of green turtles on Aldabra.  
**Keywords:** Seychelles; reptiles; coastal protected area; 5; Helena Francourt; Green turtle; Chelonia mydas  
**Notes:** 10142

**Reference Type:** Book Section  
**Record Number:** 186  
**Author:** G. Rocamora, Skerrett, A.  
**Year:** 2001  
**Title:** Seychelles.  
**Editor:** L. D. C. Fishpool, Evans, M.I.,  
**Book Title:** Important Birds Areas in Africa and associated islands; Priority sites for conservation.  
**City:** Newbury and Cambridge, UK  
**Publisher:** Pisces

**Pages:** 751-768

**Short Title:** Seychelles.

**Keywords:** Seychelles; WIO; Birds; Coastal protected area; Special management; 5; Helena Francourt; Important bird area; IBA

**Notes:** 10143

**Reference Type:** Journal Article

**Record Number:** 187

**Author:** B. R. Rosen

**Year:** 1971

**Title:** Principal features of reef coral ecology in shallow water environments of Mahé Seychelles.

**Journal:** Symposium of the Zoological Society of London.

**Volume:** 28

**Pages:** 163-183

**Short Title:** Principal features of reef coral ecology in shallow water environments of Mahé Seychelles.

**Keywords:** Seychelles; Invertebrates; benthic habitat; 5; Helena Francourt; coral reef ecology; Mahe.

**Notes:** 10144

**Reference Type:** Journal Article

**Record Number:** 188

**Author:** N. H. Saji, Goswami, B.N., Vinayachandran, P.N., Yamagata, T.

**Year:** 1999

**Title:** A dipole mode in the tropical Indian Ocean.

**Journal:** Nature

**Volume:** 401

**Pages:** 360-363

**Short Title:** A dipole mode in the tropical Indian Ocean.

**Keywords:** WIO; Seychelles; Climate; ocean temperature; 5; Helena Francourt; dipole mode

**Notes:** 10145

**Reference Type:** Book Section

**Record Number:** 189

**Author:** R. Salm, Muthiga, N. and Muhando, C.

**Year:** 1998

**Title:** Status of coral reefs in the western Indian Ocean and evolving coral reef programmes

**Editor:** C. R. Wilkinson

**Book Title:** Status of coral reefs of the world: 1998.

**City:** Townsville, Australia

**Publisher:** Australian Institute of Marine Science

**Pages:** 184

**Short Title:** Status of coral reefs in the western Indian Ocean and evolving coral reef programmes

**Keywords:** Seychelles; WIO; Benthic habitat; 5; Helena Francourt; coral reef

**Notes:** 10146

**Reference Type:** Journal Article

**Record Number:** 190

**Author:** N. J. Shah

**Year:** 1995

**Title:** Managing coastal areas in the Seychelles.

**Journal:** Nature and Resources

**Volume:** 31

**Issue:** 4

**Pages:** 16-33

**Short Title:** Managing coastal areas in the Seychelles.

**Keywords:** Seychelles; Coastal protected area; Coastal habitat; Special management; 5; Helena Francourt; management.

**Notes:** 10147

**Reference Type:** Journal Article

**Record Number:** 191

**Author:** C. Sheppard, Obura, D.,

**Year:** 2005

**Title:** Corals and reefs of Cosmoledo and Aldabra atolls: Extent of damage, assemblage shifts and recovery following the severe mortality of 1998.

**Journal:** Journal of Natural History

**Volume:** 39

**Issue:** 2

**Pages:** 103-121

**Short Title:** Corals and reefs of Cosmoledo and Aldabra atolls: Extent of damage, assemblage shifts and recovery following the severe mortality of 1998.

**Keywords:** Seychelles; Benthic habitat; Invertebrates; coastal protected area; 5; Helena Francourt; assemblage shifts; phase shifts; resilience; 1998; coral bleaching

**Notes:** 10148

**Reference Type:** Book Section

**Record Number:** 192

**Author:** A. Skerrett.

**Year:** 1995

**Title:** Birds of almost all description.  
**Editor:** M. Amin, Willetts, D. Skerrett, A.  
**Book Title:** Aldabra World Heritage Site.  
**City:** Kenya  
**Publisher:** Camerapix Publishers International.  
**Short Title:** Birds of almost all description.  
**Keywords:** Seychelles; WIO; Birds; coastal protected area; 5; Helena Francourt  
**Notes:** 10149

**Reference Type:** Book  
**Record Number:** 193  
**Author:** J. L. B. Smith, Smith, M.M.  
**Year:** 1969  
**Title:** The fishes of Seychelles.  
**Series Editor:** R. Univ.  
**City:** Grahamstown  
**Publisher:** Inst. Ichth.  
**Short Title:** The fishes of Seychelles.  
**Keywords:** Seychelles; fish; 5; Helena Francourt  
**Notes:** 10150

**Reference Type:** Journal Article  
**Record Number:** 194  
**Author:** P. J. Webster, Moore, A.M., Loschnigg., J.P., Leben., R.R.  
**Year:** 1999  
**Title:** Coupled ocean atmosphere dynamics in the Indian Ocean during 1997-98.  
**Journal:** Nature  
**Volume:** 401  
**Pages:** 356-360  
**Short Title:** Coupled ocean atmosphere dynamics in the Indian Ocean during 1997-98.  
**Keywords:** WIO; Climate; ocean temperature; 5; Helena Francourt; ocean atmosphere dynamics.  
**Notes:** 10151

**Reference Type:** Report  
**Record Number:** 195  
**Author:** J. Nevill  
**Year:** 2009  
**Title:** Mainstreaming prevention and control measures for invasive alien species into trade, transport and travel across the production landscape.  
**Series Title:** National IAS Baseline Report.

**City:** Victoria, Seychelles.

**Institution:** GOS, UNDP, GEF

**Short Title:** Mainstreaming prevention and control measures for invasive alien species into trade, transport and travel across the production landscape.

**Keywords:** Seychelles; exotics; Special management; 5; Helena Francourt; IAS; production landscape

**Notes:** 10152

**Reference Type:** Report

**Record Number:** 196

**Author:** A. Pulfrich, Steffani, C.A., Bijoux., J.P.

**Year:** 2006

**Title:** Specialist Report: The potential impacts on the marine environment of the development of Eden Island, Seychelles.

**Series Editor:** DJEC

**Series Title:** EIA for the Proposed Residential Marina and Commercial Development on Eden Island, Seychelles.

**Institution:** Report 100372

**Publisher:** S. West.

**Type:** Prepared for Eden Island Development Company (Seychelles) Limited.

**Short Title:** Specialist Report: The potential impacts on the marine environment of the development of Eden Island, Seychelles.

**Keywords:** Seychelles; Benthic habitat; nutrients; 5; Helena Francourt; EIA; commercial development; marina

**Notes:** 10152

**Reference Type:** Journal Article

**Record Number:** 110

**Author:** K. Henri, Milne, G.R., Shah, N.J.

**Year:** 2004

**Title:** Costs of ecosystem restoration on islands in Seychelles.

**Journal:** Ocean & Coastal Management

**Volume:** 47

**Pages:** 409-428

**Start Page:** 409

**Short Title:** Costs of ecosystem restoration on islands in Seychelles.

**Keywords:** Seychelles; birds; coastal habitat; exotics; coastal tourism; special management; 3; Helena Francourt; restoration; rehabilitation; biodiversity.

**Abstract:** Nature Seychelles is helping island owners participate in an island restoration programme, which will ultimately translocate globally threatened coastal birds as well as rehabilitate other



coastal biodiversity of global importance. This study estimates potential investment costs of restoring 11 islands in the Seychelles. Unit costs are calculated for specific management prescriptions and then used to derive total costs for each island. Results show that native coastal woodlands and plateaus are a least—cost priorities for habitat conversion across all islands. Owners will need to make careful investment decisions based on a number of factors including the cost of restoration, existing biodiversity and unique attractions, and potential for generating revenues to sustain conservation programmes.

**Notes:** 20044