GULF COUNTY BEACH SAMPLE DESCRIPTIONS

Worked By: Michelle Ladle Beach Samples GF-01-SS to GF-30-SS Samples Described 3/7/2011 through 3/7/2011

Beach Sample Location GF-01

GF-01-SS

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

GF-01-B

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks;

GF-01-BB

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Organics-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-02

GF-02-SS

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-02%, Shell-<1%;

GF-02-BB

Sand; White to Very Light Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

Beach Sample Location GF-03

GF-03-SS

Sand; Very Light Orange to Yellowish Gray; 6 % Porosity; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%, Shell-<1%; Fossils: Fossil Fragments, Echinoid;

GF-03-B

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

GF-03-BB

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

Beach Sample Location GF-04

GF-04-SS

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

GF-04-BB

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-04%; Fossils: Fossil Fragments;

Beach Sample Location GF-05

GF-05-SS

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

GF-05-B

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-02%, Shell-01%; Fossils: Fossil Fragments;

GF-05-BB

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Very Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%; Fossils: Fossil Fragments, Barnacles, Mollusks;

Beach Sample Location GF-06

GF-06-SS

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

GF-06-BB

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%;

Beach Sample Location GF-07

GF-07

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-01%; Fossils: Fossil Fragments;

Beach Sample Location GF-08

GF-08-SS

Sand; Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%; Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-04%;

GF-08-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%;

Beach Sample Location GF-09

GF-09-SS

Sand; Very Light Orange to Light Gray; Grain Size: Course; Range: Medium to Very Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-20%; Fossils: Fossil Fragments, Mollusks, Barnacles;

GF-09-MB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

GF-09-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

Beach Sample Location GF-10

GF-10-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

GF-10-BB

Sand; Very Light Orange to Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-05%;

Beach Sample Location GF-11

GF-11-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

GF-11-B

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-02%;

GF-11-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

Beach Sample Location GF-12

GF-12-SS

Sand; Very Light Orange to Grayish Brown; Grain Size: Course; Range: Medium to Very Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-15%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Barnacles;

GF-12-B

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-02%, Shell-<1%;

GF-12-MB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

GF-12-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%, Shell-<1%;

Beach Sample Location GF-13

GF-13-SS

Sand; Very Light Orange to Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-08%; Fossils: Fossil Fragments, Mollusks, Barnacles;

GF-13-B

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

GF-13-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%;

Beach Sample Location GF-14

GF-14-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments;

GF-14-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-03%;

Beach Sample Location GF-15

GF-15-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%, Shell-<1%; Fossils: Fossil Fragments;

GF-15-B

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

GF-15-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Very Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-05%; Fossils: Fossil Fragments, Mollusks, Bryozoa, Echinoid;

Beach Sample Location GF-16

GF-16-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%;

GF-16-MB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%;

GF-16-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Fine; Range: Very Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-05%, Heavy Minerals-01%; Fossils: Fossil Fragments, Mollusks, Barnacles;

Beach Sample Location GF-17

GF-17-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-04%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Barnacles;

GF-17-B

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid, Bryozoa;

GF-17-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subrounded; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-03%, Shell-01%; Fossils: Fossil Fragments, Mollusks, Plant Remains;

Beach Sample Location GF-18

GF-18-SS

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Organics-<1%; Fossils: Fossil Fragments;

GF-18-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%; Fossils: Fossil Fragments, Mollusks, Bryozoa, Echinoid, Barnacles; Archais angulatus

Beach Sample Location GF-19

GF-19-SS

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-02%, Organics-<1%;

GF-19-MB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-03%, Shell-02%; Fossils: Fossil Fragments, Mollusks;

GF-19-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Very Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%, Shell-<1%; Fossils: Plant Remains;

Beach Sample Location GF-20

GF-20-SS

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%;

GF-20-B

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Bryozoa, Barnacles;

GF-20-BB

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid, Barnacles;

Beach Sample Location GF-21

GF-21

Sand; Very Light Orange to Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-10%, Shell-<1%;

Beach Sample Location GF-22

GF-22

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-23

GF-23-SS

Sand; Very Light Orange to Very Light Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-<1%, Shell-<1%;

GF-23-B

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subrounded; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Organics-<1%;

GF-23-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subrounded; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-24

GF-24-SS

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid, Benthic Foraminifera; Fragment of Archais sp. present

GF-24-MB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Organics-<1%, Shell-<1%;

GF-24-BB

Sand; Very Light Orange to Yellowish Gray; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Organics-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-25

GF-25-SS

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Organics-01%; Fossils: Fossil Fragments;

GF-25-B

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Organics-01%, Heavy Minerals-<1%, Shell-<1%;

GF-25-MB

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Organics-<1%, Iron Stain-<1%; Fossils: Fossil Fragments;

GF-25-BB

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-01%, Organics-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-26

GF-26-SS

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-08%, Organics-<1%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks;

GF-26-B

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Organics-<1%; Fossils: Fossil Fragments;

GF-26-MB

Sand; Grayish Brown to Dark Yellowish Orange; Grain Size: Course; Range: Fine to Very Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-35%; Fossils: Fossil Fragments, Mollusks, Echinoid, Barnacles;

GF-26-BB

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-08%; Fossils: Fossil Fragments, Mollusks, Echinoid;

Beach Sample Location GF-27

GF-27-SS

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-05%, Organics-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid; Phosphatized Shell Fragments

GF-27-B

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Clay-02%, Shell-01%; Fossils: Fossil Fragments;

GF-27-MB

Sand; Yellowish Gray to Grayish Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Organics-<1%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

GF-27-BB

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Medium; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Heavy Minerals-01%, Shell-<1%;

Beach Sample Location GF-28

GF-28-SS

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments;

GF-28-B

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid;

GF-28-MB

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-<1%, Heavy Minerals-<1%;

GF-28-BB

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%; Fossils: Fossil Fragments;

Beach Sample Location GF-29

GF-29-SS

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-05%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid;

GF-29-B

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-03%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks;

GF-29-BB

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-05%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks;

Beach Sample Location GF-30

GF-30-SS

Sand; Yellowish Gray to Very Light Orange; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Medium Sphericity; Unconsolidated; Accesory Minerals: Shell-02%, Heavy Minerals-<1%; Fossils: Fossil Fragments, Mollusks, Echinoid;

GF-30-BB

Sand; Yellowish Gray to Grayish Brown; Grain Size: Medium; Range: Fine to Course; Roundness: Angular to Subangular; Low Sphericity; Unconsolidated; Accesory Minerals: Shell-05%, Heavy Minerals-<1%, Organics-<1%; Fossils: Fossil Fragments, Mollusks, Barnacles;