

Some notes
on Life in...



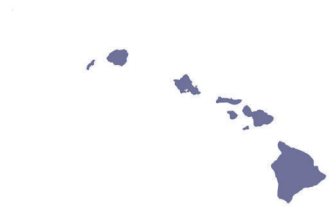


These are a record of the different living things that my family and I saw during our travels from Jeju in South Korea, through Hawaii, Vancouver, Toronto and finally Shelton, Connecticut USA, during July and August 2013.

Peter Gulian
Jeju November 2014



KEY



Kauai, Hawaii, USA



Vancouver, British Columbia
Canada

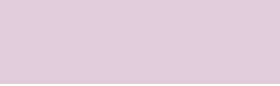
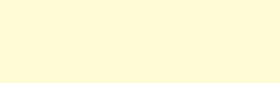


Toronto, Ontario
Canada



Shelton, Bridgeport
Connecticut, USA

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VEINS OF LIFE



PROTOCTISTA

‘original’







Haena beach

Phaeophyta
'dark brown'

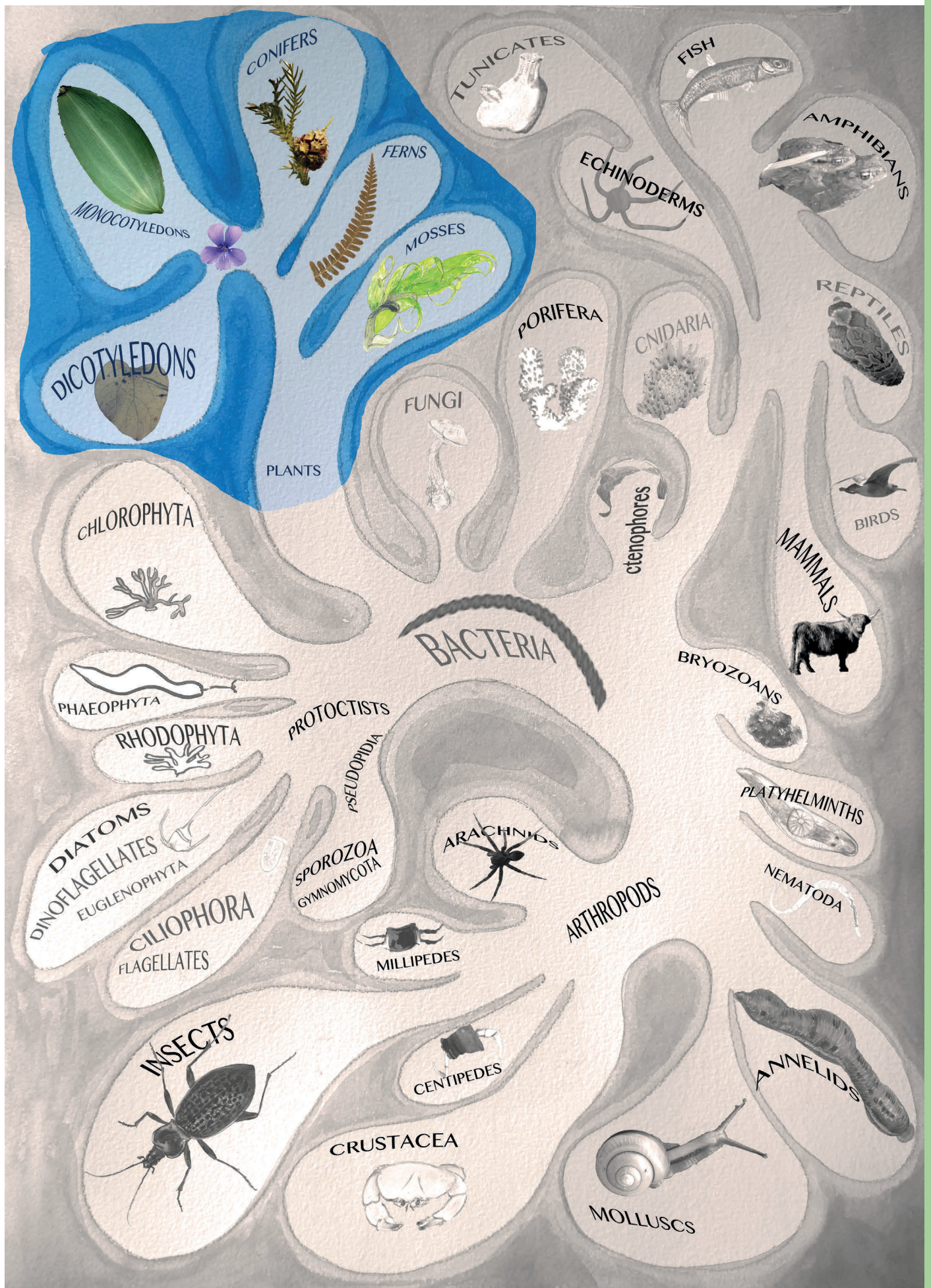
Protoctista

Turbinaria ornata

Haena Beach, Kawai
Shallow reef
10th July



PLANTS



Ptererophyta



Na Pali Coast

Angiosperm Dicotyledon

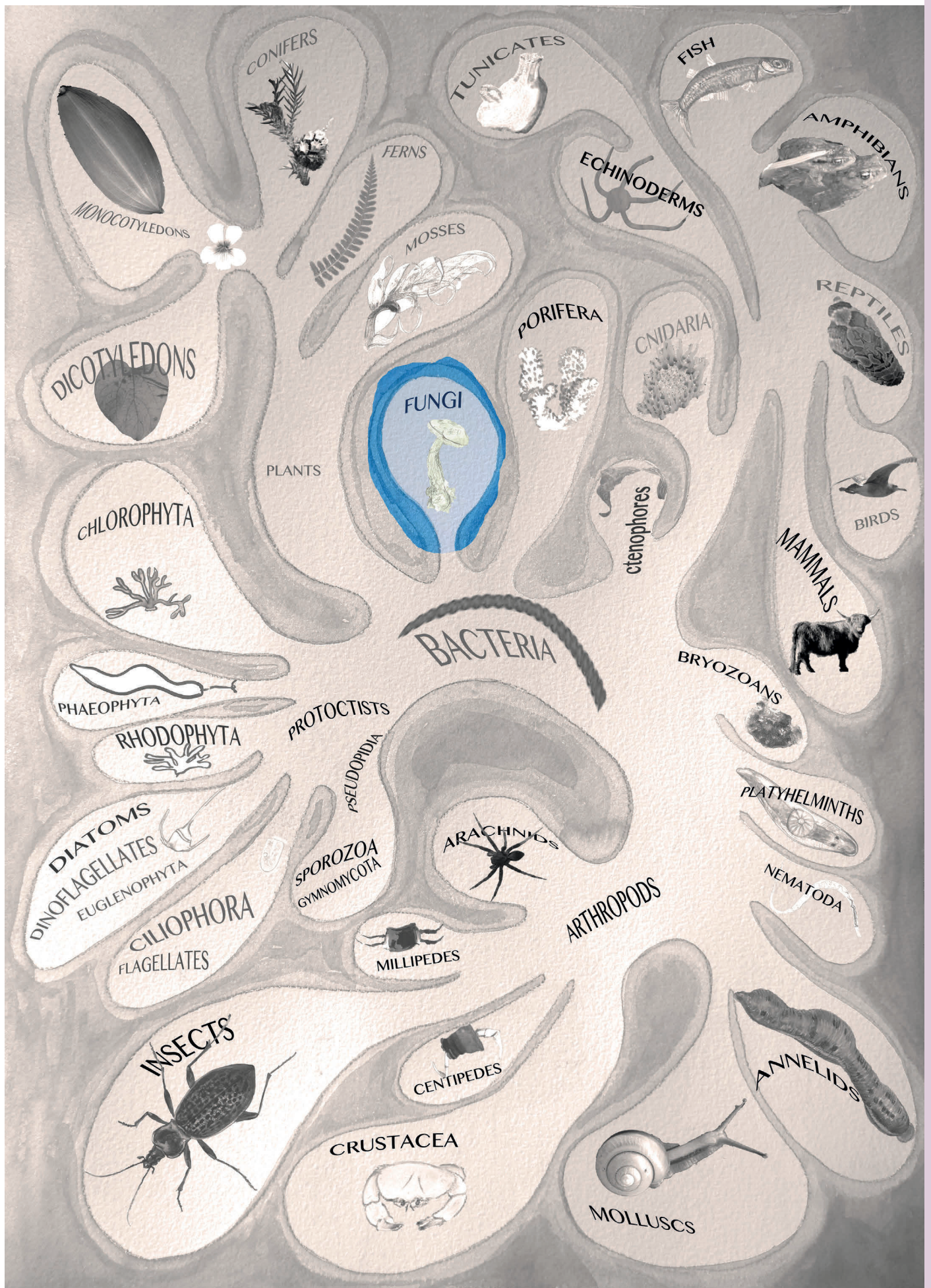
Plants



Laaukahi



FUNGI





Trichaptum biforme
violet polymore

or
Hydnum repandum
hedgehog mushroom



Bridgeport



CNIDARIA

‘to bear spores’





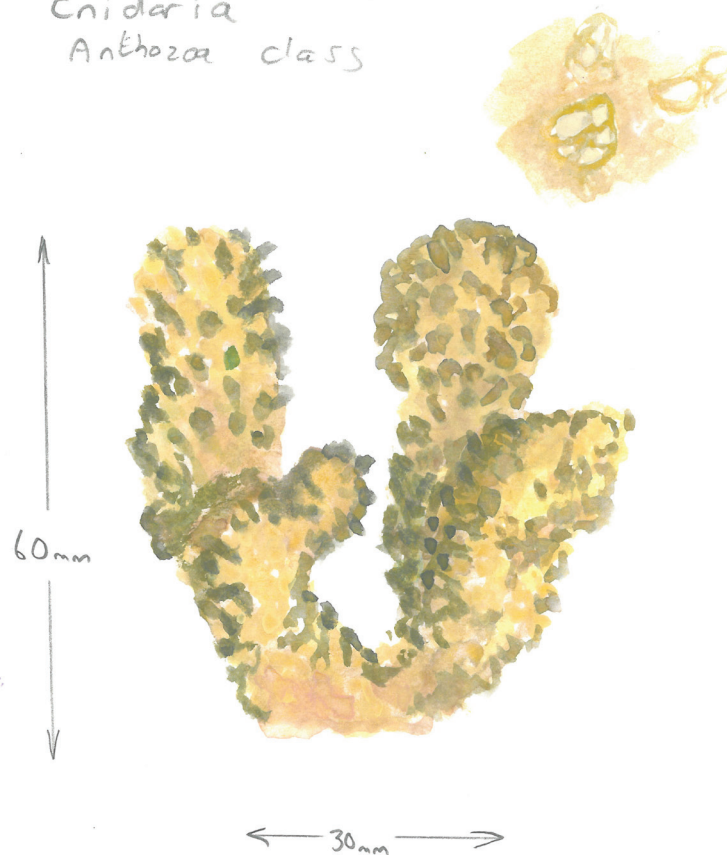
Haena bay



Pocillopora ligulata

hawaiian cauliflower coral

Cnidaria
Anthozoa class



Forms a head of coral



North coast, Hawaii

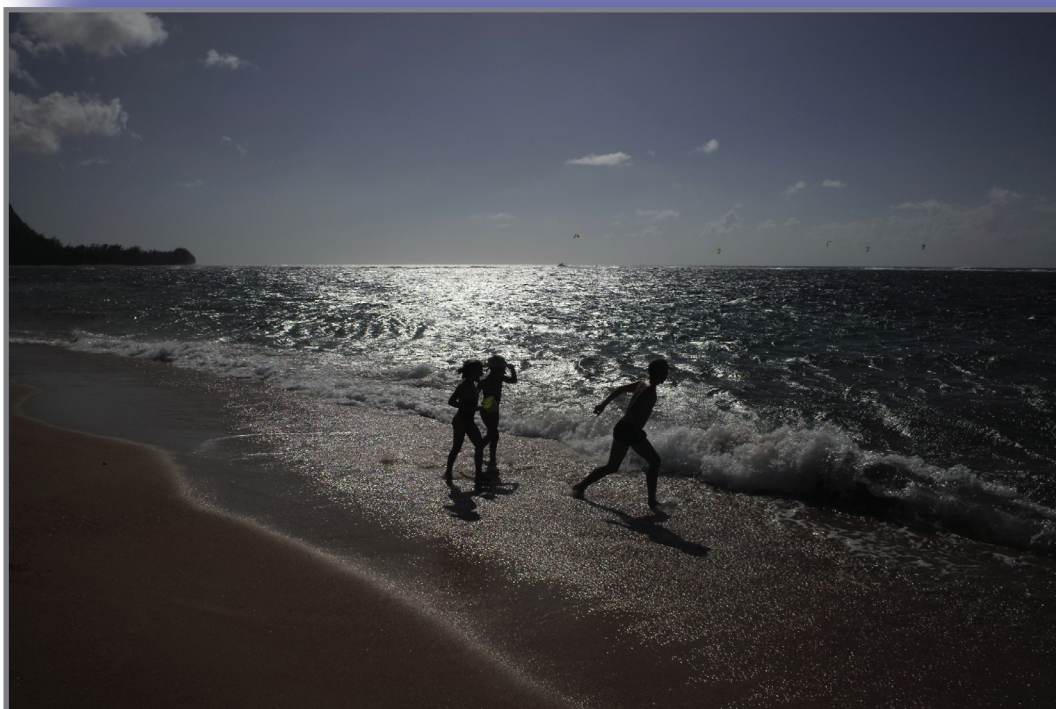


ECHINODERMS





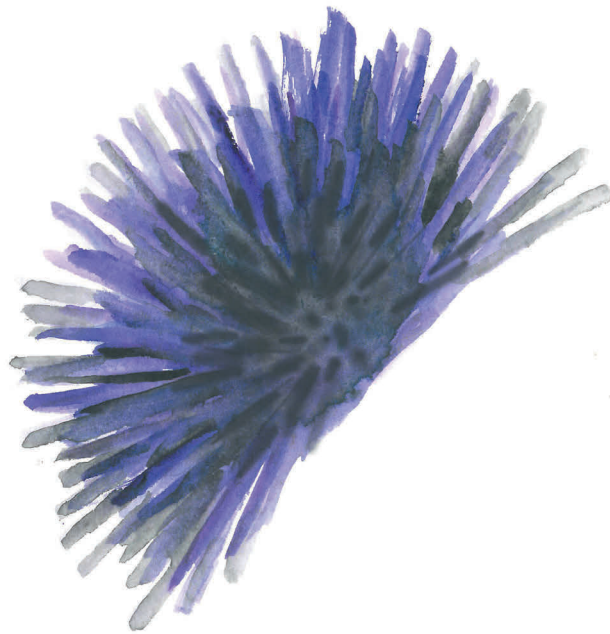
Haena bay



Echinothrix diadema

blue-black urchin

10th July 2013



Size of 1½ hands
largest urchin
I have seen.

Makua Beach, Kawai.



FISH



Waipouli



Osteichthyes with external fertilization

Actinopterygii ray-finned

Teleostei side pectorals

Perciformes

Fish

Naso unicornis

bluespine unicorn fish

July 2013
Kauai
'cow fish'
Waipouli



← 50cm →



Haena Bay



Osteichthyes with external fertilization

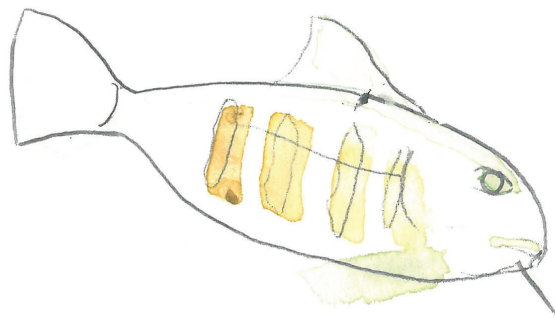
Actinopterygii ray-finned

Teleostei side pectorals

Perciformes

Acanthopterygii species

Fish



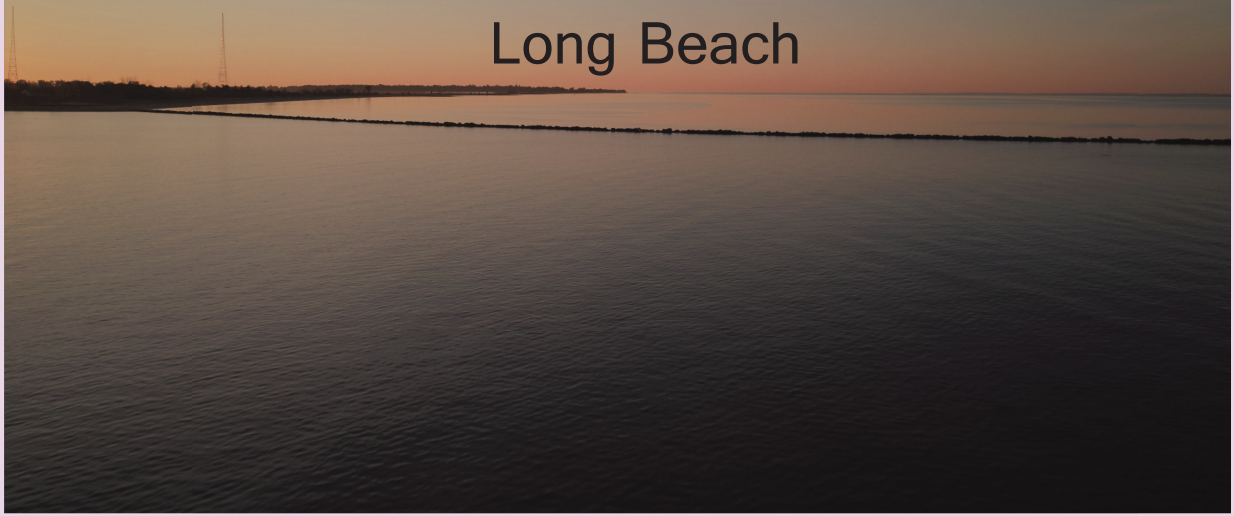
Striped yellow
goat fish
July 2013
Kauai
Waipoua
+
North coast

← 20cm →





Long Beach



Clupeomorpha

lateral line on head and operculum

Fish



← 75mm →

Anchovy
29th July 2013 Long Beach Bridgeport Connecticut



REPTILES



Poipu



Chelonia mydas
honu

Sunday 7th July
Poipu, Kauai, Hawaii



Trinodalequiangularseamjunctions
of horny plates - seen in honeybee
combs, direction of mud cracks,
hexagonal columns of basaltic lava



MOLLUSCS





Pacific Spirit Regional Park

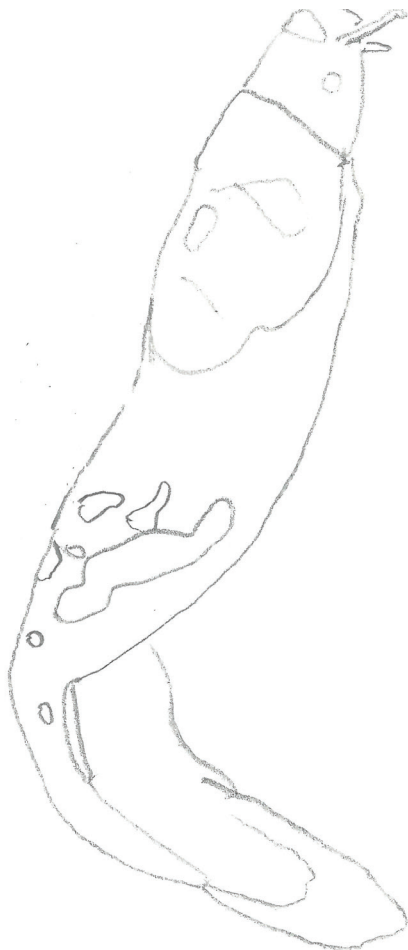
Gastropoda
Pulmonata
Stylommatophora

Molluscs

Ariolimax columbianus

banana slug

17th July 2013
Vancouver
Giant slug.
Green/yellow
Colour
on beach.



Approximate
Actual length



CRUSTACEA

jointed arthropods

2 pairs antennae

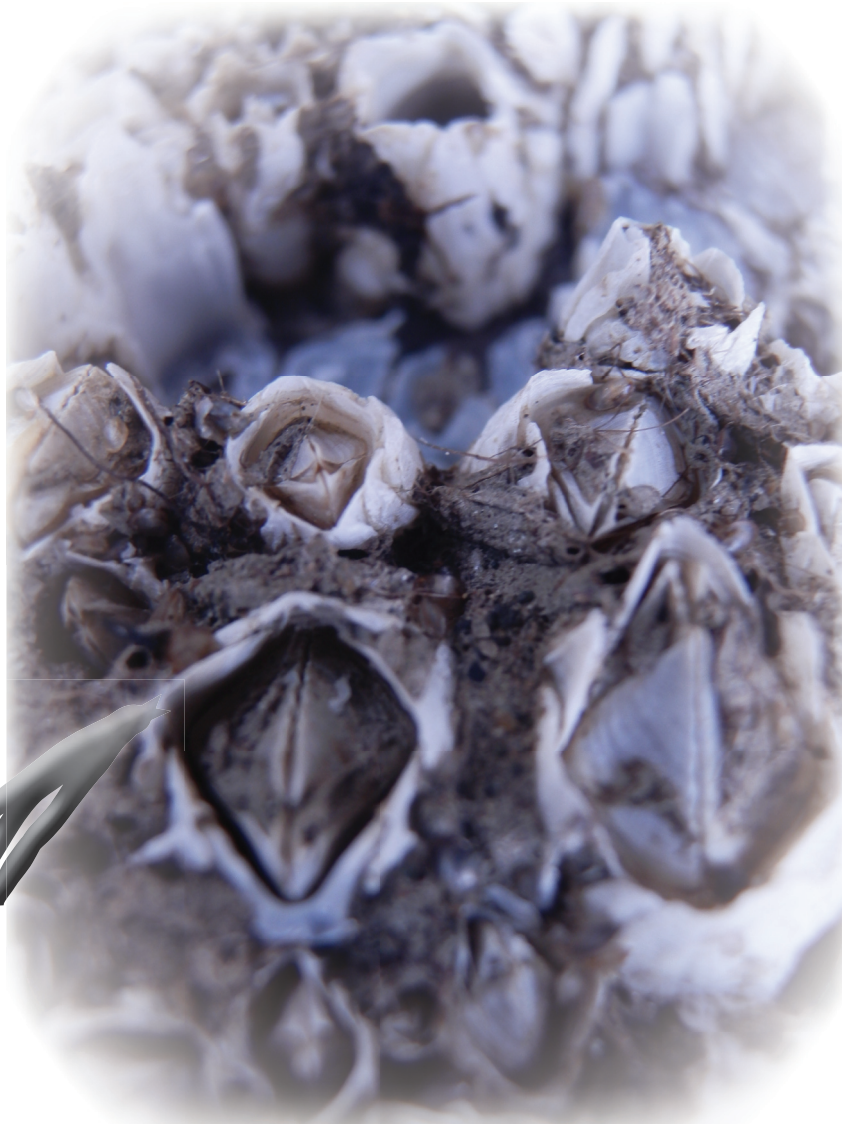




Pacific Spirit Regional Park



Semibalanus balanoides
acorn barnacle



x 6 plates



Lewis Gut



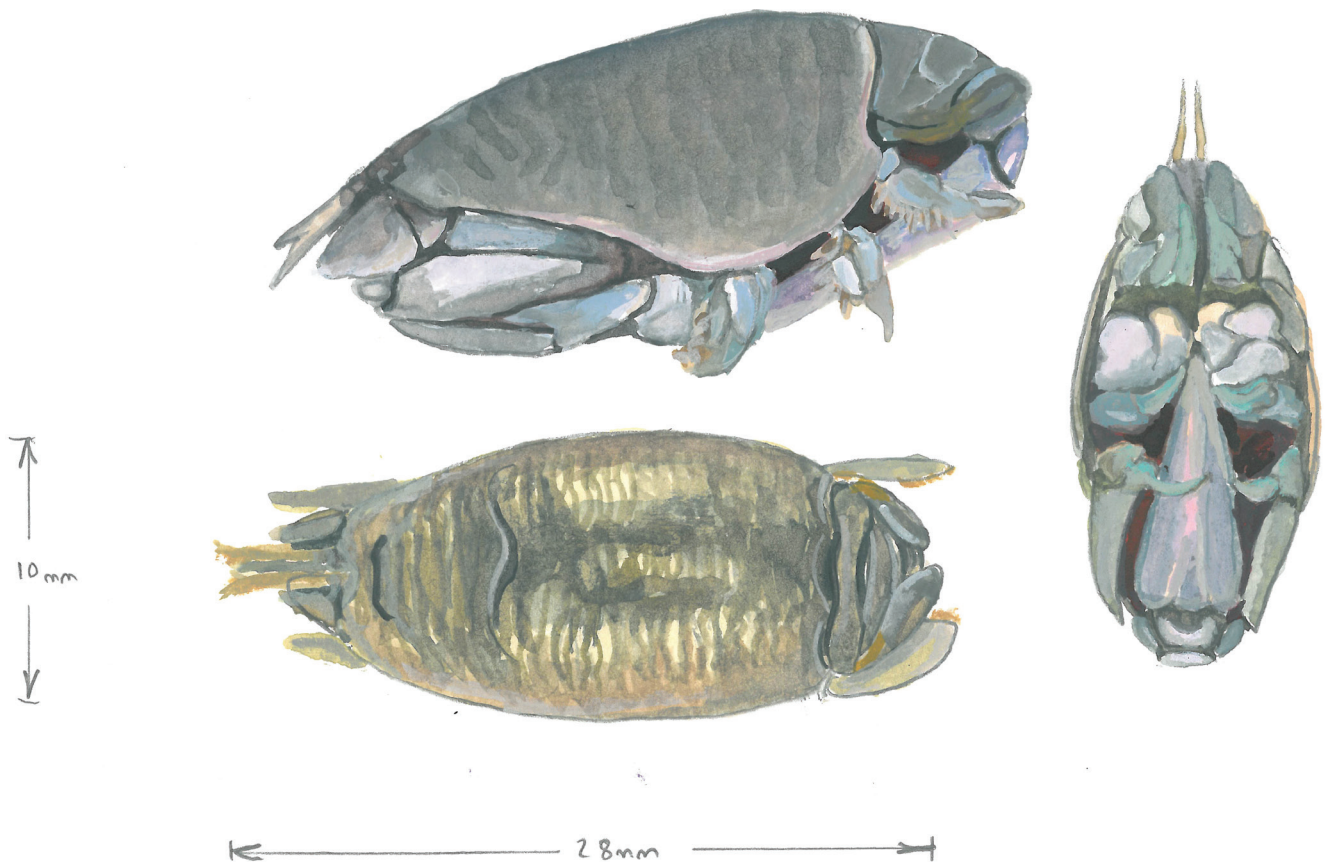
Malacostraca
Decapota

Crustacea

Emerita talpoida

mole crab, sand flea, sand crab

Long Beach, Bridgeport, Connecticut, 24th July 2013



INSECTS

2 pairs antennae

jaws

3 segments





23rd July 2013, Oxford
Connecticut



← 20 mm →

July - Shelton



Pterygota
order Odonata
class Zygoptera
damselflies

Insects

27th July
2013
Shelton



40mm





Pterygota

Insects

order Odonata

class Anisoptera

Erythemis simplicicallis

eastern pondhawk

65 mm



23rd Jun. Oxford, Connecticut





Waipouli

Xylocopa sonora

sonoran carpenter beetle



Waipouli
8th July
2013

← 24mm →





Shelton

Hemiptera

Insects

Cicadia

piercing mouth part

Tibicen chloromera

swamp cicadia

31st August 2013
Shelton, Connecticut



30mm

44mm





Waipouli



unknown species

11th July 2013
Wapouli
Kawai
Hawaii
Night
Flight.



11 mm



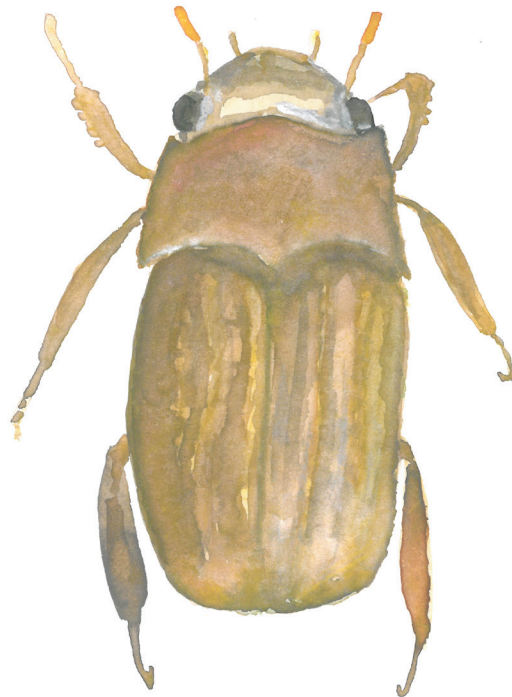


Waipouli

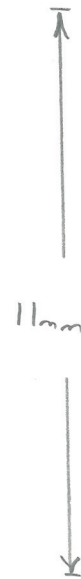
Coleoptera
Carabidae

Insects

Spilota plagicollis
or
Eotrichia niponesis



11th July
Waipouli
Kauai
Hawaii



Night.





Pacific Spirit Regional Park



Carabus species

Vancouver
Canada
July 2013.



10 mm





Coleoptera
Silphidae

Insects

Necrophila americana



15mm
26th July 2013
Shelton, USA



Pacific Spirit Regional Park



Coleoptera
Coccinellidae

Insects

Harmonia axyrids
asian multicolored ladybird





Coleoptera
family Synchronoidae

Insects

Synchroa punctata



13mm

29th July 2013, Shelton, Connecticut





Waipouli

Diptera

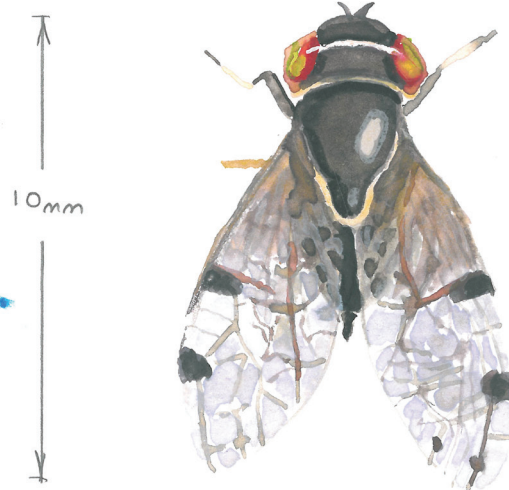
Insects

order Acalyptrate

superfamily Ephydroidea

family Drosophilinae

11th July 2013
Walpole
Kauai
Hawaii



Trupanea (or) Drosophila



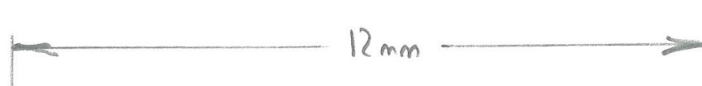


Lepidoptera
family Tortricidae

Insects

Xenotemna species

9th July Na Pali
Coast
Kauai
Hawaii





North Of Kauai



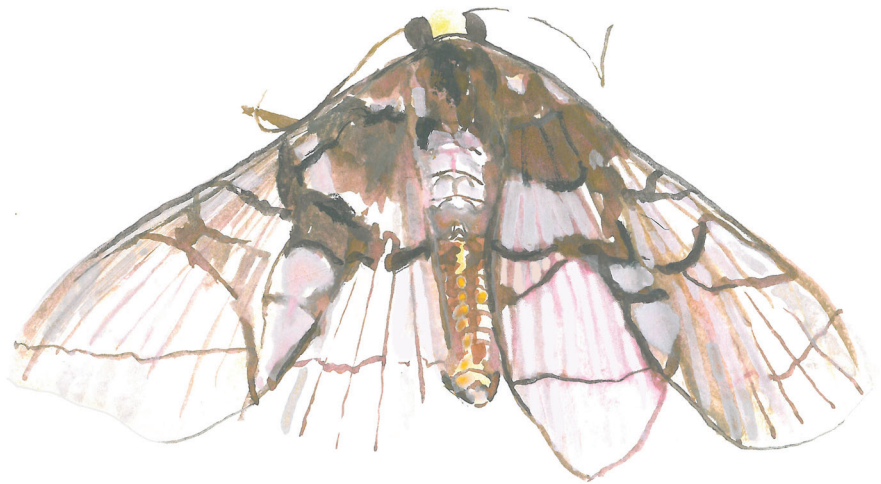
Lepidoptera
family Geometridae

Insects

Cydia species

Geometridae

Wai pahi
Kawai, Hawaii
9th July 2013



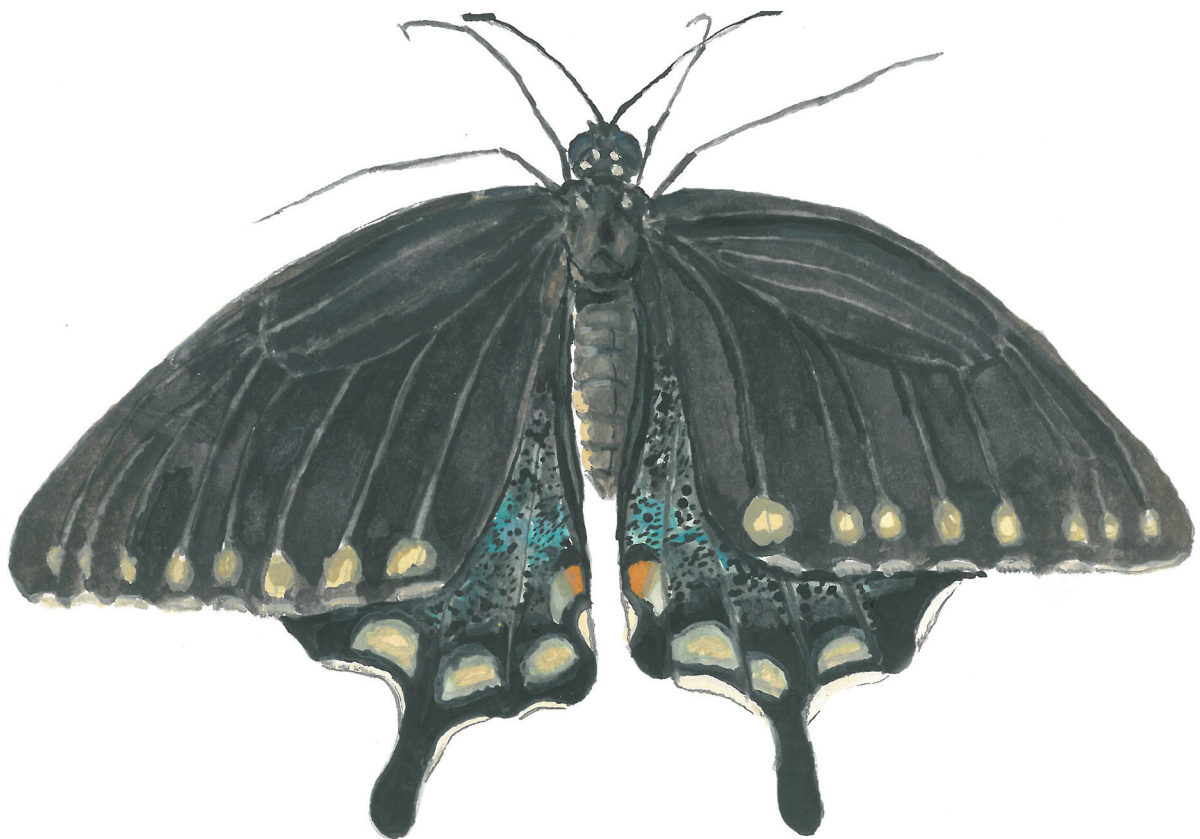
← 23mm →





underside

Papilio polyxenes
black swallowtail



← 80mm →
26th July 2013 Shelton





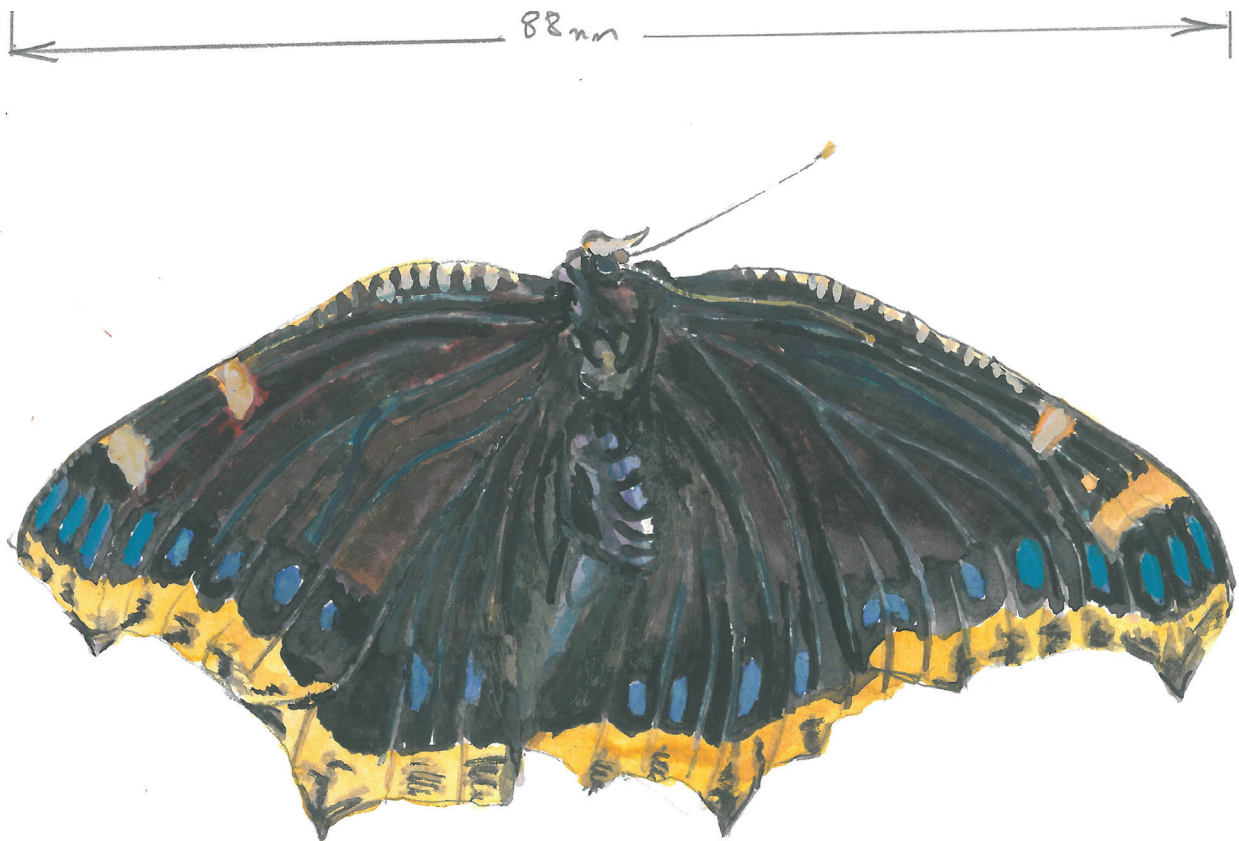
Toronto



Lepidoptera
Pieridae

Insects

Nymphalis antiopa
mourning cloak



19th July Toronto 2013



MILLIPEDES



Vancouver



order Julida

Class Diplopoda

2 pairs antennae

jaws

2 feet per segment

Litiulus alaskanus



← 30mm →



ARACHNIDS





Long Beach



class Merostomata
order Xiphosura

Chelicerata
no jaws , no antennae

one of the oldest classes of arthropods and has changed little over last 445 million years

Limulus polyphemus
atlantic horseshoe crab



2 Samples. One with long tail,
Other with short.

4 pairs main walking legs, Gills.

490mm

27th July 2013, Long Beach, Bridgeport.





Waipouli

order Araneae

Class Arachnida

Argiope appensa
hawaiian garden spider



