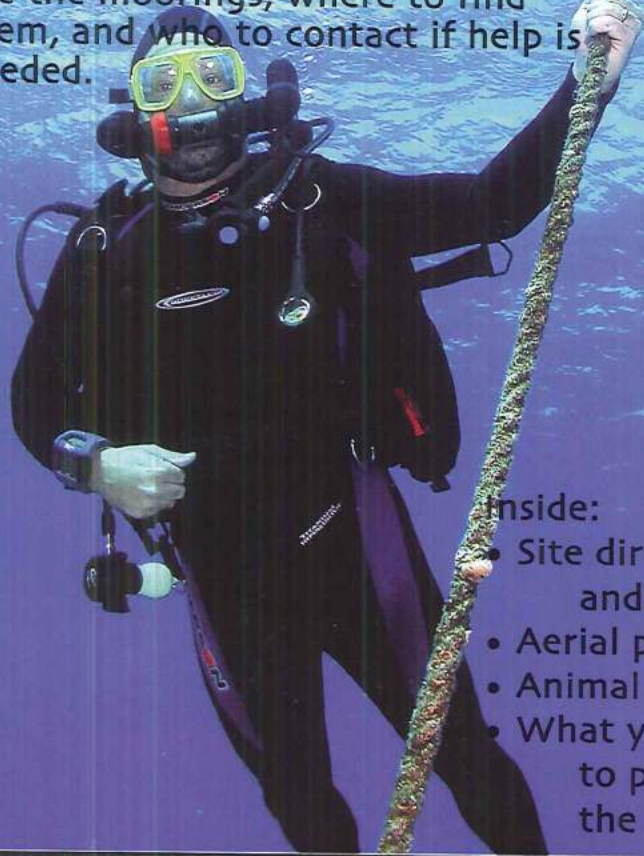


Day-use mooring buoys provide a safe, simple, inexpensive way to secure marine recreational vessels with minimal impact on the marine environment. Anchors smash fragile corals. Corals grow very slowly, some only 1-2 inches a year, and reefs damaged by anchors may take decades to recover, if ever.

This book provides everything you need to know about how to safely use the moorings, where to find them, and who to contact if help is needed.

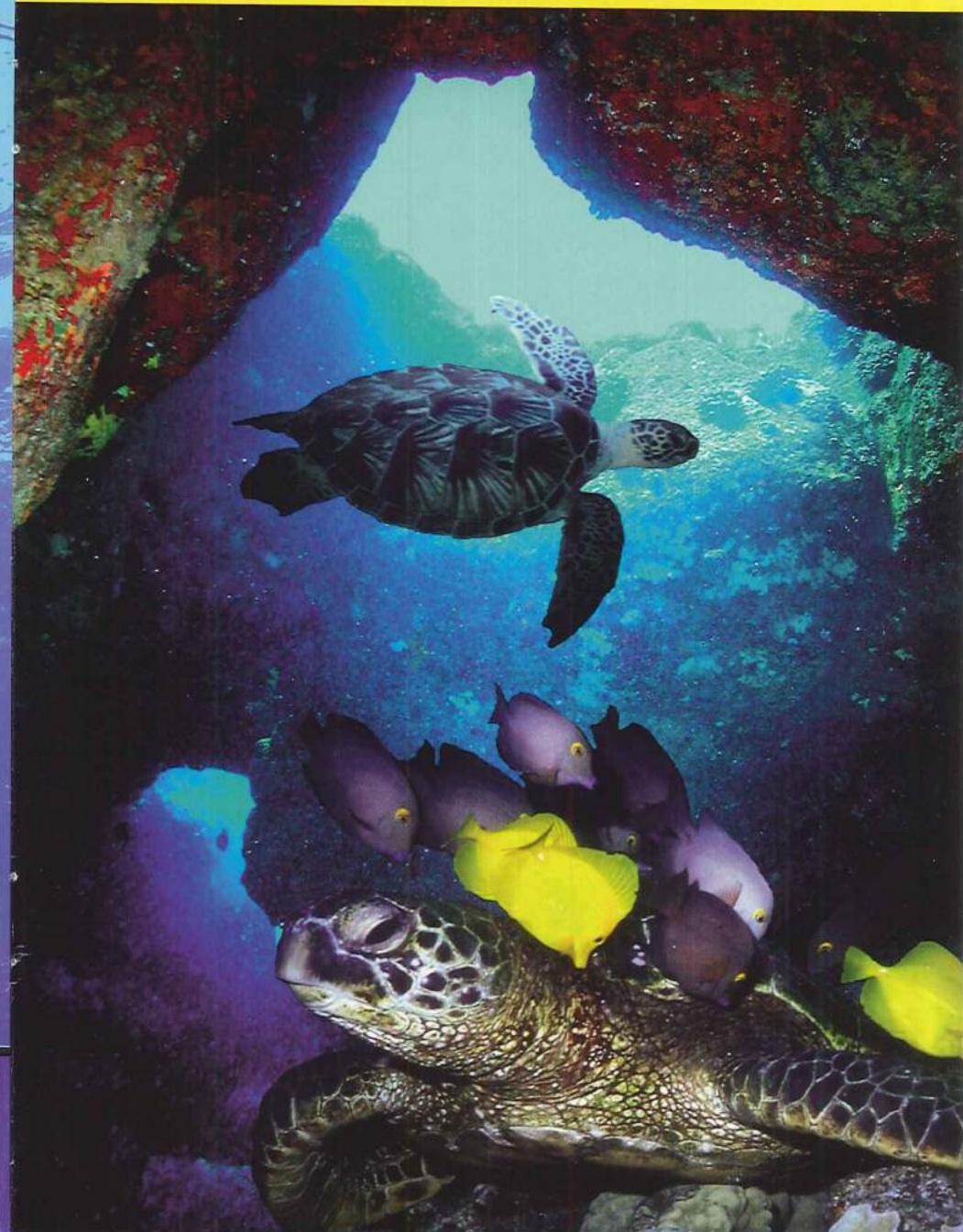


Inside:

- Site directions and descriptions
- Aerial photos of sites
- Animal stories and ID
- What you can do to preserve the environment.

Proceeds from this book support marine conservation

Dive West Hawaii By Day-Use Moorings



Jerry Garcia Dives the Kona Coast



RKL/JDL

This guidebook is dedicated to Jerry Garcia, legendary lead singer of the Grateful Dead, whose enthusiasm for diving and love of the marine environment was instrumental in the installation of the first day use moorings off the Kona Coast on the island of Hawaii. He assisted in installations and spoke before the Hawaii Board of Land and Natural Resources about the need for installing mooring buoys to keep coral reefs healthy.

Mooring Buoys:

60

- An easy, lasting and stable method for remaining stationary.
- A more planned boat traffic flow pattern around some of the more popular dive sites. Buoys are placed far enough away from one another so that when wind or currents shift, boats do not collide. Moving traffic lanes are away from active divers.
- Peace of mind that the boater is not blindly smashing the same coral reef they have come to appreciate.

Yes, I Want to Adopt-A-Buoy!

Name _____
Address _____
City _____ State _____
Zip _____ Email _____
Telephone () _____

Please make check or money order payable to:
Malama Kai Foundation
P.O. Box 6882
Kamuela, Hawaii 96743
(808) 885-6354

Thank you for donating, your donation is tax-deductible!
(IRS Tax ID #99-0285490)

Donations will be used to install the buoys as equipment, weather, and manpower are available. You will receive notification when your buoy has been installed.

JDL

The Adopt-a-Buoy Program:

59

The Adopt-a-Buoy Program is a non-profit effort made possible through a unique partnership between the State of Hawaii, various non-governmental organizations, and concerned volunteers. All donations are tax deductible.

The buoy is placed at a site already approved for a mooring. Donors may pick on which of these sites they want their adopted buoy located, but this will not give them any more right to use the mooring than any other user. The buoys will be placed at heavily used areas, and access to these buoys will be on a first-come-first-served basis.

Day-use moorings have proven to be an effective tool in reducing the damage to coral reefs caused by anchors. The mooring system for hard bottoms has two components 1) a stainless steel eyebolt that is cemented into an approximately 1 inch diameter hole drilled into a solid substrate, and 2) a line extended toward the ocean surface, attached to a buoy either on the surface or below. Sandy bottom moorings have manta anchors installed to hold them in place.



For more information on Hawaii's mooring system, look up the mooring website at www.malama-kai.org.

JDL

Dive West Hawaii By Day-Use Moorings



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Photos: Aerial photos: Gary Kegel of Plane Views Hawaii, Sara Peck (SP), Jack's Diving Locker (JDL), Dive Makai (DM), Kendra Choquette-D'Avella (KCD), BG Johnson (BG), D. Chave (DC) Greg McLaughlin (GM), Jan McLaughlin (JEM), Keller Largos (RKL).

Editing: University of Hawaii Sea Grant Communications, School of Ocean Earth Science and Technology, Malama Kai

Text: J. Andrew Laurence, E. Tong (animals)

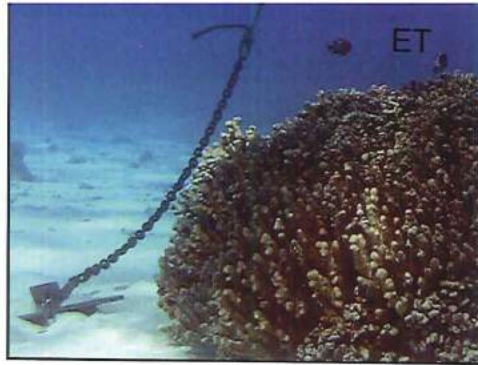
Front Cover: JDL and DM-KCD **Back Cover:** JDL **This Page:** GJM

New layout and design: Ellyn Tong

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Buoys Save Coral

1 The Hawaii Island Day-Use Mooring Buoy Project began almost a decade ago when a small group of forward thinking, conservation minded dive charter operators decided that something had to be done to protect the island's coral reefs.



For years they witnessed conventional anchoring practices wreaking havoc on the marine environment. Even when anchors were not dropped directly on coral reefs, anchor drag along the bottom could do just as much damage to the ocean substrate.

In an attempt to alleviate this situation, The Ocean Recreation Council of Hawaii (TORCH) (now disbanded) began working to find a solution with the University of Hawaii Sea Grant Extension Service, School of Ocean Science and Technology, and George Wilkins of the University of Hawaii Institute of Geophysics and Planetology. By modifying the mooring pin technology developed in the Florida Keys by John Halas, they designed a mooring buoy system suited to the marine environment of the Hawaiian Islands.

Through donations and over fifteen years of dedication and persistence by a small group of people, over 50 moorings have been installed along the Kohala-Kona Coast. The moorings have been thoroughly tested and have proven their worth in helping us preserve our rich marine resources. We continue to enjoy the many benefits they provide.

How You Can Help

- **Monitor** the conditions of buoys.
- **Report** damage.
- **Inform** others how to use the buoys.
- **Use** moorings-it is easier and safer than anchoring and it protects marine life.
- **Adopt-A-Buoy**—a tax deduction!

Latitude: N 19°29.665' Longitude:W 155°57.010' 1 buoy-DM 46

Ridges

Shore Reference Bearings

- 1 340° on the peak of the "Red Hill" cinder cone
- 2 170° on the visible tip of Keaweakeheka Point
- 3 Straight in to shore

Dist. to Shore

- 1 1 1/2 mi
- 2 650 yds
- 3 80 yds

Depth: 32' 58

Getting Here: Travel approximately 5 miles south of Keauhou Bay. Head into the south end of the last cove area on the north side of Keaweakeheka Point. Keaweakeheka is the last point north of Kealakekua Bay. Note: this is included in the "Red Hill" Kona Coast Fisheries Management Area Zone; collecting and feeding fish is prohibited.

To Find This Mooring: Line up on the shore references and locate the buoy.

Site Attractions:

Dusted with sand, rocks, boulders, and corals, this site is an excellent example of a marine environment with a lava flow substrate. It is named "Ridges" because the lava formations look like the ridges on Ruffles potato chips. Divers can survey any of the lava tube outcroppings along the bottom for marine animals and their habitats. You will find a large population of fish species here.

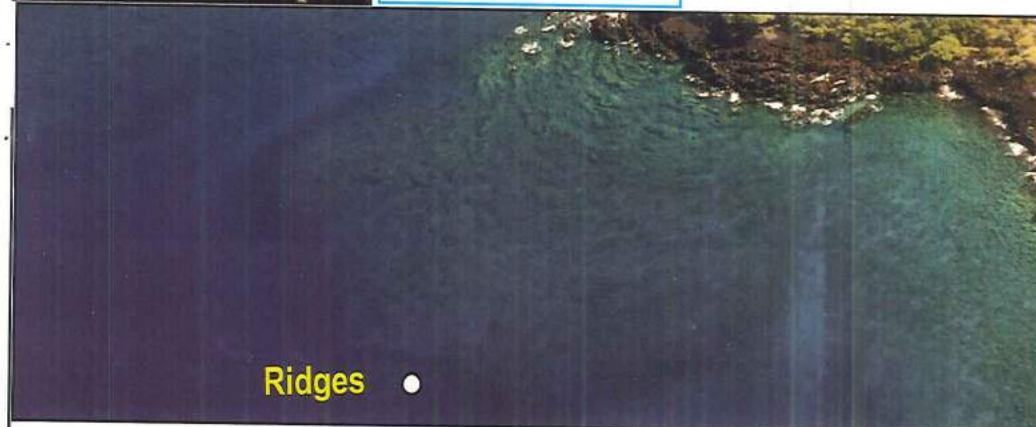
My Notes:

Spanish dancer nudibranch.

Nudibranch means "naked gill". It is a mollusk without a shell. **Not edible.** Named for the sinusoidal swimming motion it does when not on substrate.



Ridges •



JDL

Driftwood

1 buoy-DM 45 Latitude: N 19°29.929' Longitude: W 155°57.088'

57 **Depth: 42'**

Shore Reference Bearings

- 1 340° on the peak of the "Red Hill" cinder cone
- 2 145° on the visible tip of the land extension to the south
- 3 Straight in to shore

Dist. to Shore

- 1 1 mi
- 2 3/4 mi
- 3 65 yds

Site Attractions:

Intriguing rock ledges, lava tubes that are easy to enter and exit, lots of fish, and high species diversity make this a great dive. Exercise caution when swimming through the lava tubes, and only enter them on days where there are no strong surges or currents.

Getting Here: Travel 4 1/2 miles south of Keauhou Bay to reach this site. About 200 yds S of the landmark known as "Amphitheater" the cliff face dips down to a squared-off point. The upper portion of the point is covered with grass and many trees. Stop here. **Note:** This is in the "Red Hill" Kona Coast Fisheries Mgmt. Area Zone; collecting and feeding fish is prohibited.

To Find This Mooring: The buoy is about 65yds straight out from the squared-off point on shore. Use the shore reference bearings. Named "Driftwood" for a dead tree that has fallen immediately to your right as you face the squared point on the shoreline. (04/05-it's still there)

The Dome

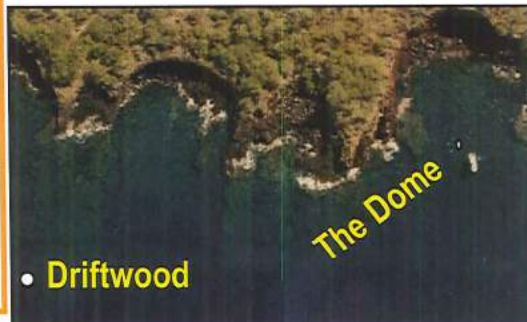
DM-45A Latitude N 19° 29.823' Longitude W 155° 57.002'

Depth: 36'

Site Attractions: This site has great coral and fish all around, and a large, roomy dome-shaped cavern. The cave is N of the mooring, under the jumble of boulders which have fallen from the cliff above. It's about 25ft deep, with a high ceiling, a large skylight, and exits on 3 sides. A dive light isn't required, but will enhance your pleasure. If your eyes are good, you might find *Pteraeolidia lanthina* (the "Blue Dragon" Nudibranch) on the boulders on the floor of the cave.

Getting Here: Go 10.3 statute miles S. of Kailua Pier, or 4.5 miles S. of Keauhou Bay.

To Find This Mooring: Use GPS. The mooring is near the north side of a cove. The depth at the pins is 36 feet. A large sand/rubble patch is just south of the mooring.



Use Designation

- YES- a standard 12 passenger boat in moderate weather.
 - NO- a larger vessel or any vessel during stormy weather.
- **Exceed these recommended limits at your own risk!!**

Finding the buoys

- Travel to the buoy using the bearings and GPS coordinates.
- Idle around the area or carefully send a snorkeler to look.
- Some buoys have a surface marker, others are 8-10 feet below the surface. Please clean the buoy to make it easier to find next time.

If you can't find the mooring, it may be missing.

Please report missing moorings so they can be replaced:

Malama Kai Foundation: (808)885-6354

Securing your vessel:

- If there is a pick-up line, you can secure it to your boat cleat.
- If there is no pick-up line, then you must send a snorkeler down to pass your bow line through the tie-off ring, bring the line back up to your boat, and secure it to the cleat.
- **Length of scope: length of vessel=5:1.** Allow enough scope in your line so you do not put excessive stress on the mooring.
- When the mooring system is free to sway with the ocean's movements it can absorb more stress and the "ride" of your vessel will be easier while you are on the mooring. If you do not let enough scope, there is a greater risk of damage to the mooring and the safety of your vessel.

For the safety of your boat:

- Do an inspection of the mooring before use. Send a diver down to the bottom. Check the bridle, the inside surface of each shackle and each link of chain. **While these parts may look good at first glance, further inspection of their inner surfaces may reveal heavy deterioration and a potentially dangerous mooring.** If the bridle is made of stainless steel wire rope, check the cable for dangerous amounts of fraying and inspect each wire clamp for functional integrity. Then, for all types of rigging, follow the riser line up to the surface, inspecting it for cuts and significant amounts of fraying.
- **Always keep someone on watch aboard the boat!**

Dive Site Index

3

Moorings Not Rigged

as of (4/05):

DM 28 , DM 37
DM 38, DM 40
DM 42



DM	Site	Description	page
1	Black Point N	48ft /arch, sand flats, sharks, overhangs	8
2	Black Point	55ft /deep dive, 100ft wall, fragile corals	9
3	Black Point S	53ft /lava tube(*caution!), drop off, coral	9
4	Kei Kei Caverns N	51ft /corals, caverns, fish	10
5	Kei Kei Caverns S	42ft /lava tubes, caverns(*caution!)	10
6	Ulua Caverns	30ft /ledges, caverns, drop off, deep	11
7	Frog Rock	54ft /caverns(*caution!), shore access	12
8	Lava Dome Rock	40ft /large coral head, shore access	13
9	Crystal Cove	43ft / turtles, octopi, coral	14

Amphitheater 1 (Long Lava Tube)

Latitude: N 19°30.239' Longitude: W 155°57.183 1 buoy-DM 43

Shore Reference Bearings

- 1 350° on the peak of the "Red Hill" cinder cone
- 2 120° on the tip of the tall south wall of the "Amphitheater" cove
- 3 Straight in to rocky shore

Dist. to Shore

- 1 700 yds
- 2 130 yds
- 3 40 yds

Depth: 52' 56

Site Attractions: Aka. "Long Lava Tube.", the long lava tube is about 70ft long with very smooth walls. Use a flashlight and caution when swimming through this tube. If uncomfortable or inexperienced in cave diving do not attempt to dive this or any other lava tubes. Caves and a big rock archway are excellent places to find marine life. Corals and lots of fishes live here.

How to Get Here: See Red Hill.

To Find This Mooring: Continue south past "Red Hill" and "Yellow Hill" (the tall, roughly triangular-shaped cliff with yellow rock at the top which forms the south wall of the small bay). Just south of "Yellow Hill" find the small cove which cuts back into the cliff and forms a cave. This is the landmark commonly known as "Amphitheater". Do not go past this cove. Stop near the west side of the entrance to "Amphitheater" where the rock shore slopes smoothly down into the water. Position your vessel using the shore references and locate the buoy.

Amphitheater 2 (Octocoral)

Latitude: N 19°30.185' Longitude: W 155°57.145' 1 buoy-DM 44

Shore Reference Bearings

- 1 355° on the peak of the "Red Hill" cinder cone
- 2 115° on the tip of the tall south wall of the "Amphitheater" cove
- 3 Straight in to the rock shore

Dist. to Shore

- 1 750 yds
- 2 80 yds
- 3 50 yds

Depth: 40'

Site Attractions: Very long lava tubes, rock archways, and caves are found close to shore. A long ridge runs mauka to makai with an abundance of octocoral growing on the S. side of the ridge. With a short swim you are sure to see sizable fish populations, corals, and lots of marine life.

To Find This Mooring: See Amphitheater 1.

Flatworms come in many colors. They have many eyes on their heads and feed on colonial tunicates and other flatworms. Both male and female at the same time. They are most often seen at night.



My Notes:

Sharkey's or Bay of Pig (Red Hill)

1 buoy-DM 41

Latitude: N 19°30.371' Longitude: W 155°57.305'

55 Depth: 49'

Site Attractions: There are many excellent underwater features here. Rock archways, a small lava tube, interesting rock formations, corals, and a multiplicity of marine organisms are sure to be found within a short swim.

Shore Reference Bearings	Dist. to Shore
1 Align the black cobble rock beach in the small bay between 050°-085°	1 90 yds
2 090° on the peak of the "Yellow Hill" cliff face	2 110 yds
3 Straight in to the wash rocks	3 60 yds

Getting Here: Travel south out of Kailua Bay for approximately 4 miles. Once you are south of Keikiwaha Point, locate the tall, tree-covered cinder cone which comes down to the

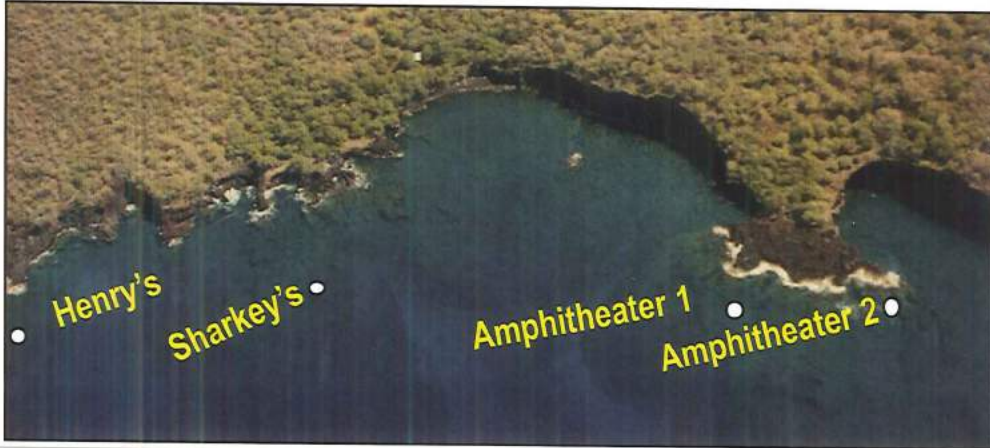
water's edge forming a red cinder rock cliff face. This is the landmark commonly known as "Red Hill." The "Red Hill Area," as this location is referred to, encompasses the entire coast from Nenu Point to Keawekaheka Point. **Note:** This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find this Mooring: Continue past "Red Hill" for approximately 170 yards until you are right in between "Red Hill" and "Yellow Hill" (the tall, roughly triangular-shaped cliff with yellow rock at the top that forms the south wall of the small bay). Do not enter the bay but locate the wash rocks around the bend of the north end of the bay. A few yards north of the wash rocks is a small squared-off rock finger extending out into the

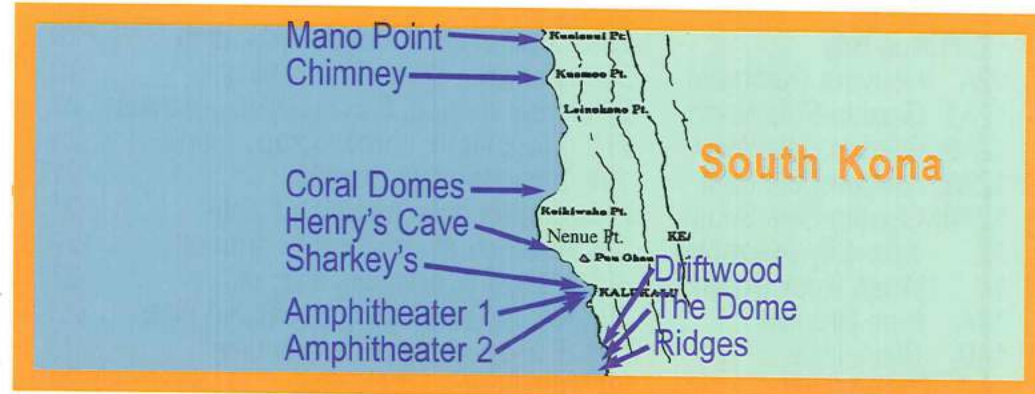
water a few feet farther than the rest of the shoreline. The buoy is about 60 yards due west of the wash rocks immediately south of the small squared-off rock finger. Line up on the other shore references and locate the buoy.



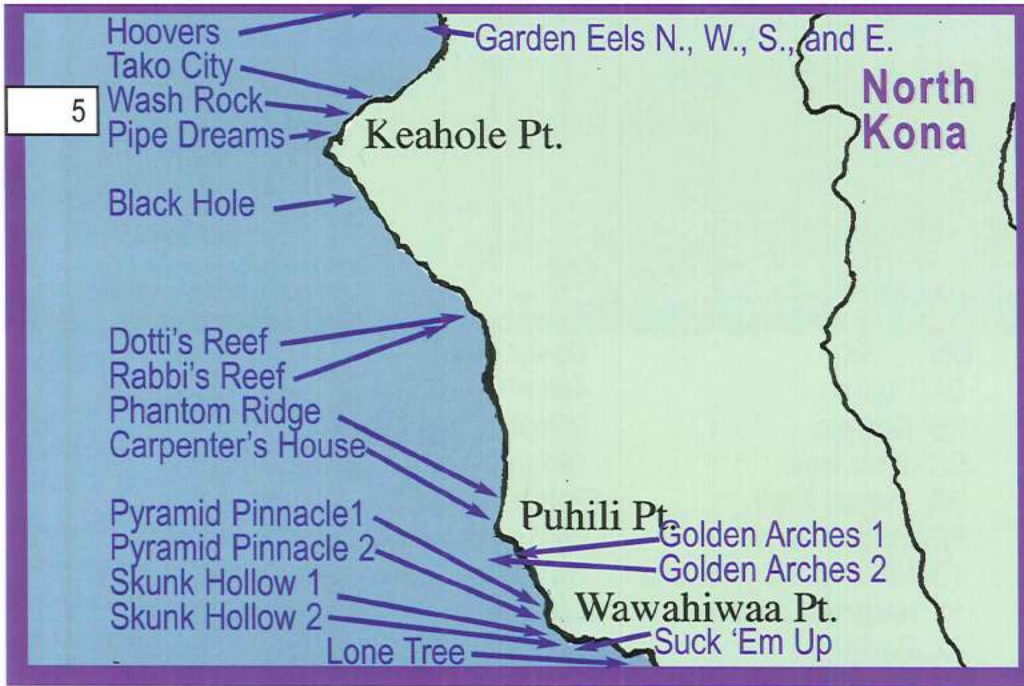
Goldlace Nudibranch



DM	Site	Description	page
9A	Puako	40ft /drop off, garden eels, barracudas	15
9B	Secrets	35ft /fish, sea turtles	15
9C	Pine Tree	18ft /nudibranch, ghost shrimps	15
9D	Paniau North	20ft /rocky grottos, lava pinnacles	15
9E	Paniau South	40ft/ swim throughs, rocky grottos	15
10	Makaiwa Bay(Turtles)	28ft /ledges, archways, caverns, turtles	17
11	Haunted Cavern	34ft /arches, caverns, valleys, turtles	17
12	Pentagon	18ft /snorkeling, lava cavern network	18
13	Kua Bay (see coast map)	23ft /arches, ridges, sand, eagle rays	19



DM	SITE	Description	page
35	Mano Point	42ft /sharks, lava tubes	51
36	Chimney	41ft /rocky outcrops, lava tube*	52
39	Coral Domes	33ft /large coral heads, sand, gdn.eels	53
40A	Henry's Cave	43ft /caverns, ridges, corals, fishes	54
41	Sharkey's	49ft /archways, rock formations	55
43	Amphitheater 1	52ft /long lava tube (caution), caves, arch	56
44	Amphitheater 2	40ft /lava tubes, archways, caves	56
45	Driftwood	42ft /ledges, lava tubes(caution!)	57
45A	The Dome	36ft /lg. cavern, ridges, marine life	57
46	Ridges	32ft /lava flow substrate, outcroppings	58

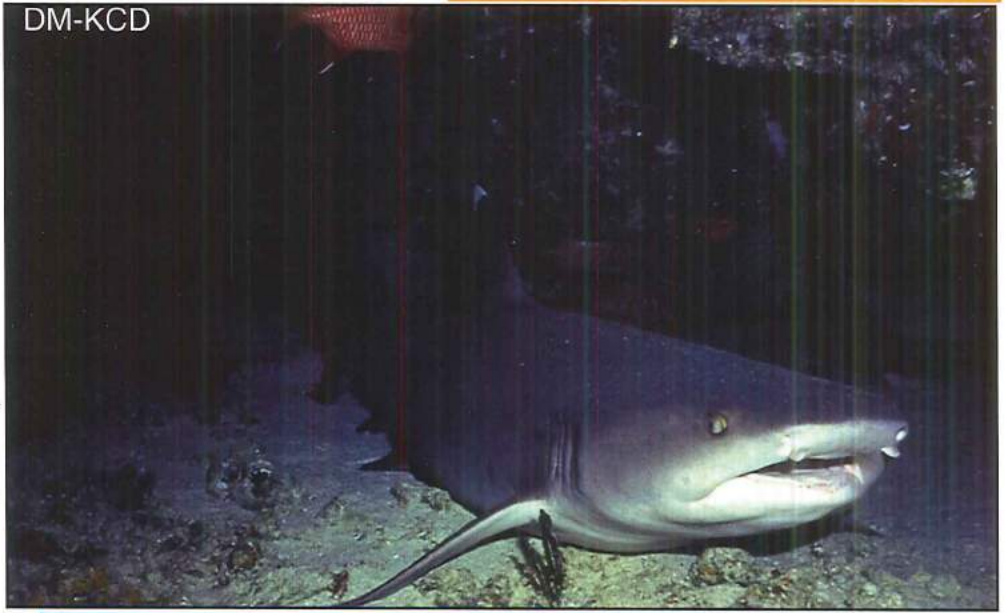


Getting Here: Go south of Kailua pier 9.5 statute miles (3.5 miles south of Keauhou Bay). "Red Hill" is the area south of Keauhou and north of Kealakekua Bay. Between two prominent points, it is home to several day-use moorings, including this one.

To Find This Mooring: Use GPS. The prominent landmark here is Pu'u O'hau ("Red Hill" itself). Henry's Cave is directly outside of some wash rocks at the southern edge of this high, rust-colored cliff face.

Site Attractions: "Henry's" is named for "Henry", the White-tip Reef Shark who used to inhabit this lava tube in the 1980's. His heirs continue to enjoy these "digs" to this day. If the entrance to the cavern was a mouth, the eyebolt that holds this mooring would be a lip-piercing. The cavern is long and wide, but not tall; you have to lay prone. Find the highest section of ceiling to crawl under if you want to "shoot the tube" and exit through a skylight in the ceiling near the inshore boundary of the cave. A dive light will definitely come in handy here. The cavern is in about 45 feet of water.

DM	SITE	Description	page
12.01	Kua Bay	23ft /coral encrust. ridges, trtls, arch	19
12A	Hoovers (Keahole)	35ft /pinnacle, drop off, dolphins	20
12A1	Garden Eels North	26ft /coral dropoff, fairy basslets, mantas	21
12A2	Garden Eels West	27ft /black sand. chute, octopi, mantas	21
12A3	Garden Eels East	19ft /beginner dive, mantas	21
12A4	Garden Eels South	23ft /garden eels, mantas nt. dive	21
13	Tako City (Keahole)	35ft /sand chute, infant fish, drop off	22
14	Wash Rock (Keahole)	32ft /variety of animals, drop off	22
14A	Pipe Dreams	39ft /crl, stp drop off, fish, NELHA pipe	23
14B	Black Hole	55ft /L-shaped chimney, adv dive	23
14C	Dotti's Reef	28ft /pinnacles, corals, fish	24
14D	Rabbi's Reef	47ft /pinnacles, arches	24
15	Phantom Ridge	38ft /ridge, pinnacle, octopi	25
16	Carpenter's House	34ft /canyons, arches, caves, pinnacles	25
17	Golden Arches 1	40ft /rock arch, different habitats	26
17A	Golden Arches 2	26ft /arch, pinnacle, drop off	26
18	Pyramid Pinnacle 1	65ft /deep dive, drop off	27
19	Pyramid Pinnacle 2	38ft /4 pinnacles, tubes, deep dive, snkl	27
20	Skunk Hollow 1	32ft /outcroppings, lava tubes	28
21	Skunk Hollow 2	40ft /deep dive, lava tubes	28
22	Suck 'Em Up	35ft /protected spot, 2 caves(*caution!)	29
23	Lone Tree (Big Arch)	40ft /cavern w/ skylights, arch	30



☐ **Whitetip Reef Sharks** rest in caves or under ledges during the day and feed on reef fishes and octopi at night. Besides white tips on dorsal and caudal fins, they may have a few dark grey spots.

Coral Domes

1 buoy-DM 39 Latitude: N 19°31.307' Longitude: W 155°57.562'

53 **Depth: 33'**

Site Attractions:

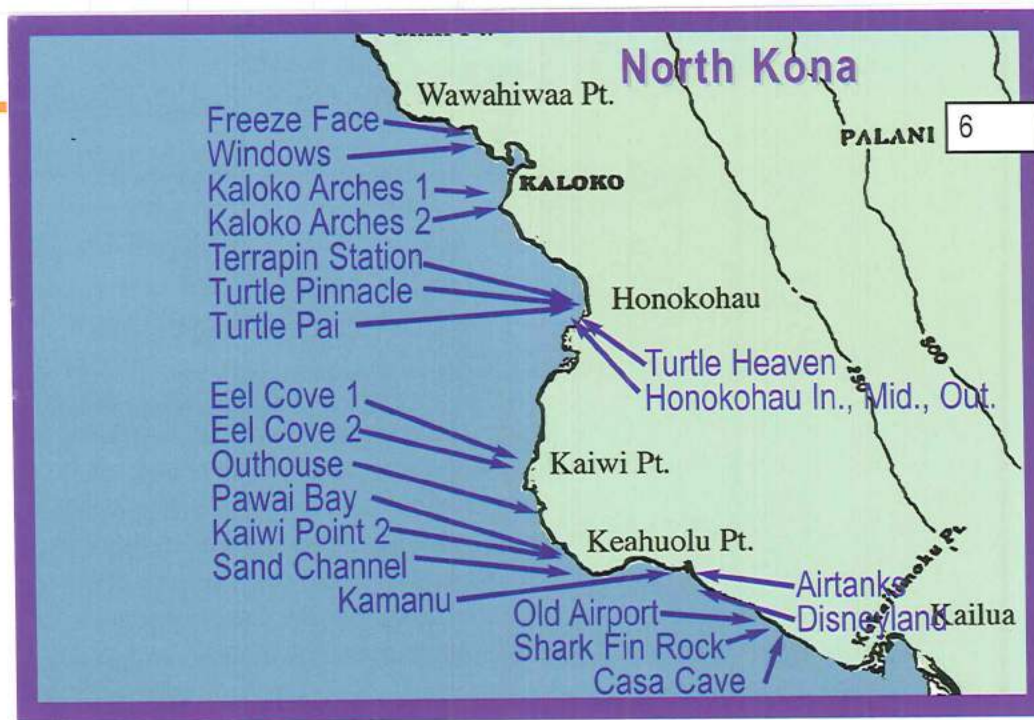
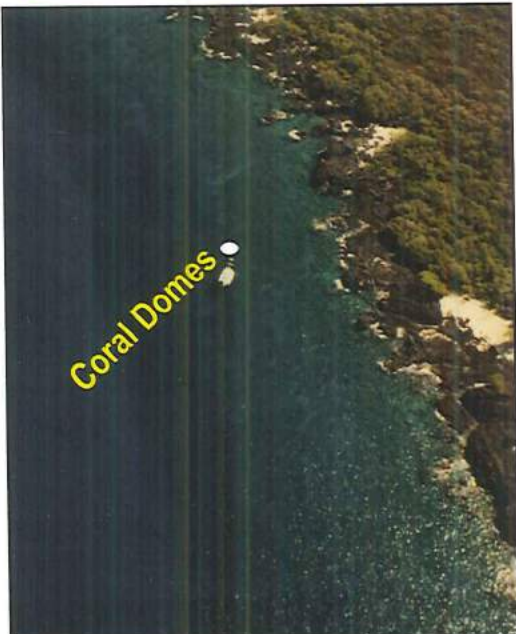
"Coral Domes" is so named for the two giant heads of "Christmas Tree" coral that have grown together a few yards out from the mooring. A large sand patch lies just outside these coral heads at a depth of about 80 feet where many garden eels have made their homes. An assortment of other marine organisms will also be found throughout the area.

Shore Reference Bearings

Bearing	Dist. to Shore
1 030° on the southeast end of Kainaliu Beach	1 250 yds
2 217° on the visible tip of Keikiwaha Point	2 45 yds
3 Straight into the two flat rocks on the shore of Keikiwaha Point's north face	3 50 yds

Getting Here: Travel south of Keauhou Bay for 2 3/4 mls. At this point you will see Kainaliu Beach, the only long sandy beach on this part of the coast. Head in toward the southeast corner of the beach and follow the shoreline along until you are approximately 45 yds inside the north face of Keikiwaha Point, which is the point immediately south of Kainaliu Beach. It is the first major point you will encounter along the coast south of Keauhou Bay.

To Find this Mooring: Use GPS or in positioning your boat to find this buoy, look out to the visible tip of Keikiwaha Point where the flat rocks rise about 15 feet over the water's surface. Align the tip of these flat rocks on the 330° mark on your compass and stop your vessel inside the point, approximately 45 yards east of those rocks. Then, starting from the point and moving back toward Kainaliu Beach, count the three largest flat rock fingers that extend toward you a few feet out into the water from the rest of the shoreline. The buoy is located between the second and third flat rock fingers, about 50 yards out in the water.



DM SITE	Description	page
23A Freeze Face	23ft /dark cave w/ fresh water flow	31
23B Windows	33ft /sand patches and coral formations	31
24 Kaloko Arches 1	43ft /rock outcroppings, drop off, canyons	32
24A Kaloko Arches 2	35ft /caverns(*caution!), fragile corals	32
24A1 Terrapin Station	35ft /pinnacles, corals, turtles	33
24B Turtle Pinnacle	32ft /trtls, pinnacles, cold, (*caution!)	33
24C Turtle Pai	21ft /pinnacles, corals, turtles	34
24D Turtle Heaven	22ft /pinnacles, corals, sand patches	34
24E Honokohau In.	18ft /coral, fishes	35
24F Honokohau Mid.	16ft /coral, fishes	35
24G Honokohau Out.	20ft /coral, fishes, dropoff, garden eels	35
25 Eel Cove 1	33ft /drop off, deep dive, canyons	43
26 Eel Cove 2	15ft /drop off, deep dive, canyons	43
26A Outhouse	47ft /drop off, deep, animals, pinnacles	44
27 Pawai Bay (Kaiwi)	40ft /cliff walls, arches, caverns, drop off	45
29 Kaiwi Point 2	40ft /pinnacle, cliff wall, drop off	46
30 Sand Channel(Kaiwi)	40ft /cliff walls, pinnacles, drop off, sand	46
31 Kamanu	45ft /cavern(*caution!)	47
32 Disneyland	33ft /coral, fishes, dropoff	48
32A Airtanks	28ft /coral, fishes, dropoff	48
33 Old Airport	40ft /MLCD, pinnacles, drop, trtls, mantas	49
34 Shark Fin Rock	36ft /pinnacle, arch, drop off, corals	50
34A Casa Cave	38ft /cavern, corals, fishes	50

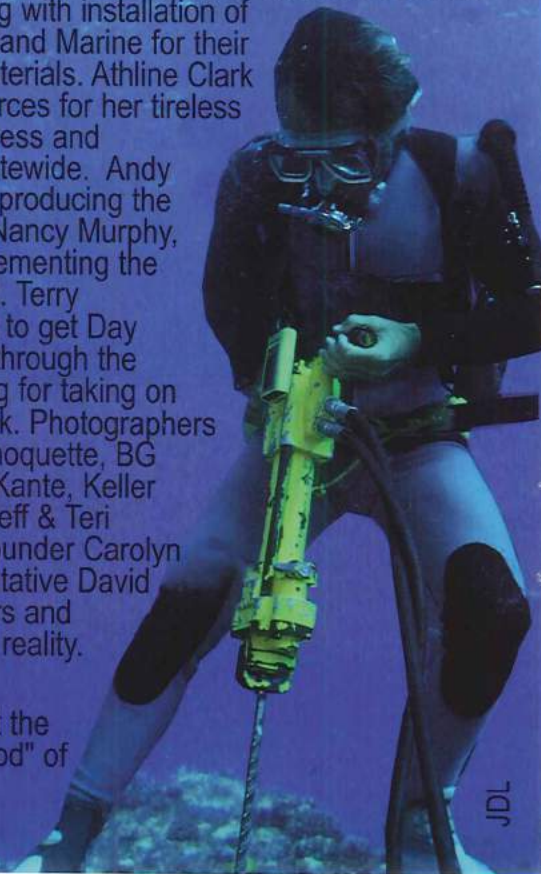
Thanks

to all those whose patience, dedication,
and hard work make this project possible.

It's impossible to thank all the folks that helped us with this project so please forgive us if we've missed someone. We would like to start with George Wilkins and Ray Tabata from University of Hawaii Dept. of Geophysics and Seagrant for taking the vision of Jeff and Teri Leicher to protect our reefs from anchor damage making it a reality. Also, Jeff & Teri (Jack's Diving Locker), Lisa Choquette & Tom Shockley (Dive Makai), and Tina Clothier for helping with the experimental installations and getting the original permit process started. Ian Birnie DOT for believing in the project and getting the first experimental moorings approved. Virginia Isbell for her courageous testimony before the Land Board to get the original 46 moorings approved. Jerry Garcia, Kidd Candalario and members of the Grateful Dead rock band for their time, testimony, photos and the initial \$10,000 donation that allowed us to purchase materials for the first 46 moorings. Turner Lett (Kohala Divers), Francis Ruddle & Steve Boreri (Maunalani Sea Adventures), Dan Ruth (Kona Aggressor), Jeff McConnell (Ocean Sports Waikoloa) for helping with installation of moorings. Kona Marine and Big Island Marine for their contribution of day use mooring materials. Athline Clark from DLNR Dept. of Aquatic Resources for her tireless efforts in continuing the permit process and installation of day use moorings statewide. Andy Woerner (Jack's Diving Locker) for producing the maintenance plan. Jeff Bearman, Nancy Murphy, and Jeff Newton (DOBOR) for implementing the maintenance plan on the Big Island. Terry O'Halloran who continues the effort to get Day Use Moorings approved statewide through the Malama Kai Foundation. Elyn Tong for taking on the huge task of producing this book. Photographers Greg & Jan McLaughlin, Kendra Choquette, BG Johnson, Kidd Candalario, Bennie Kante, Keller Laros, Sara Peck, Elyn Tong and Jeff & Teri Leicher. Malama Kai Foundation founder Carolyn Stewart and former State Representative David Tarnas, and all the other contributors and volunteers who made this project a reality.

With special gratitude

To John & Judy Halas, who brought the original concept of the "Halas Method" of day use moorings to the world.



JDL

Latitude: N 19°32.475' Longitude: W 155°57.600' 1 buoy-DM 36

Chimney

Depth: 41' 52

Shore Reference Bearings

- 1 090° on the southernmost cave (the biggest cave)
- 2 155° on "Red Hill" (the tall tree covered cinder cone) to the south
- 3 101° on north end corner of wash rocks, just out from caves

Dist. to Shore

- 1 60 yds
- 2 2 mi
- 3 25 yds

How to Get Here: Travel S out of Keauhou Bay for approximately 1 1/2 miles. Watch the shore for the first part of the coast S of Keauhou Bay where the rock cliff faces rise high above the water. This is an unmistakable site. There are three caves in close proximity to each other dug out of the cliff face. These caves are located just below the highest point of the cliff.

To Find this Mooring: Stop at the N end of the wash rocks that are a few yards out from the caves. Get your position on the shore reference bearings and locate the buoy, which is about 25yds W of the north corner of the wash rocks.

Site Attractions:

This site has rocky outcroppings, corals, and a large sand patch west of the mooring; however, without doubt, the main attraction is the vertical lava tube known as "Chimney." On days of calm weather it is possible to swim up into this lava tube. Do not attempt this swim if you are uncomfortable diving in caverns and lava tubes, or if there is strong surge or currents on the day you visit this site!



DM-KCD



• Chimney

Mano Point (Fantasy Reef)

1 buoy-DM 35

Latitude: N 19°32.757' Longitude: W 155°57.700'

51 **Depth: 42'**

Site Attractions: You will find some interesting lava formations and lava tubes in the nearshore waters of this site. This spot is also commonly known as "Fantasy Reef" because of the excellent coral reef located close by. Be careful not to damage these corals as you descend or swim near the reef formations. Several species of fish and a variety of other marine organisms inhabit these waters. A whitetip reef shark has been known to frequent the area, thus giving this site the name, "Mano Point".

Shore Reference Bearings

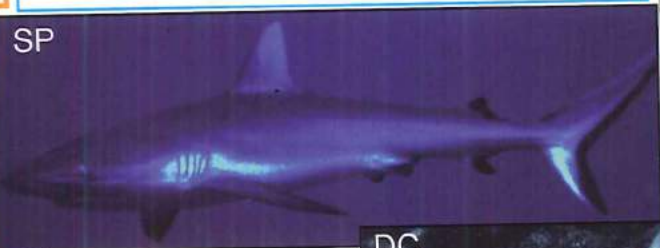
	To Shore
1 305° to the north on the point just south of Keauhou Bay	1 1/2 mi
2 165° on "Red Hill" (the tall tree-covered cinder cone) to the southeast	2 2 1/2 mi
3 Straight in to the shore	3 80 yds

Getting Here: Traveling south out of Keauhou Bay, head into the only cove south of the Sheraton Keahou Resort and Spa that cuts far back into the shoreline. This is commonly known as an "End of the World Cove." Just outside of this cove on the south side, look for where the lava flow shoreline rises to its highest point. On this cliff the trees sit back about 10 yards from the edge. Position your vessel approximately 80 yards out from here.

To Find This Mooring: Use the shore reference bearings.

Sharks keep fish populations healthy by removing weak, sick fish. Globally, populations of sharks are in decline. Most aren't dangerous. Hammerhead sharks have an unusually shaped head with sensory receptors that help them detect prey. It has also been proven that hammerheads tan.

SP



Black Tip
My Notes:

DC



Hammerhead

Black Point North

Latitude: N 20°06.775' Longitude: W 155°53.177' 1 buoy- DM 01

Depth: 48' 8

Shore Reference Bearings

	Dist. to Shore
1 330° on the next major extension to the north	1 265 yds
2 70° on the tip of Malae Point	2 350 yds
3 Straight out from the cluster of white rocks	3 50 yds

Getting Here: This site lies approximately 6 1/2 miles north of Kawaihae Harbor. Although commonly referred to as "Black Point", this site has been identified as Malae Point by NOAA Chart 19327. It is the first major point along the coast of the two rock cinder cones on the shoreline known as "Red Hill".

To Find this Mooring: Use a GPS or continue north past Malae Point until you reach the cluster of small and medium sized wash rocks located approximately 30 yards out from the shoreline. At the northernmost end of this cluster is a single wash rock one or two feet more north than the rest of the rocks. The mooring is located 45 to 50 yards due west of this small wash rock. Position your vessel on the other shore reference bearings and locate the buoy. There may be a surface marker which will help you find this mooring.

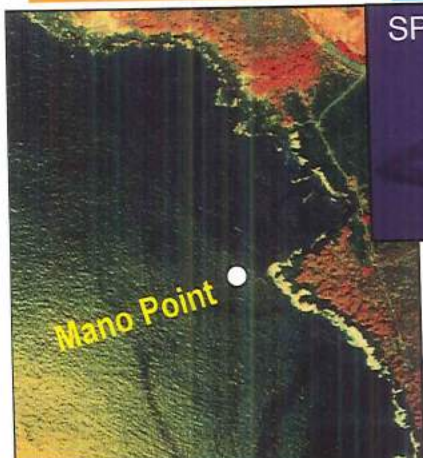
Site Attractions: In addition to one big rock arch, there are large sand flats and corals throughout the area. Many fish and eels inhabit these waters. There are rock overhangs under which you will often find White Tip sharks resting.



Cup coral grows on the roofs of caves. It is eaten by a similar-looking nudibranch.

My Notes:

• **Black Point North**



Black Point

1 buoy-DM2 Latitude: N 20°06.349' Longitude: W 155°53.086'

9 Depth: 55'

Site Attractions: This is a good site for a deep dive. A sheer wall drop-off to 100 feet occurs a few yards west of the mooring. The many rock plateaus make for a great deal of profile along the bottom of this site. Both small and large fish thrive here because of the shallow and deep waters along the point. Be especially cautious not to disturb the fragile corals as you descend and swim near the bottom.

Shore Reference Bearings	Dist. to Shore
1 025° on the small wash rocks on the north side of Malae Point	1 85 yds
2 075° on the navigational marker atop the hill on Malae Pt.	2 200 yds
3 Straight in to the cliff wall of Malae Point	3 75 yds

Getting Here: This site is 6 1/2 mi. north of Kawaihae Harbor. It is the first major point along the coast north of the two red rock cinder cones on the shoreline known as "Red Hill".

To Find This Mooring: Use a GPS or stop your vessel about 75 yards straight out from the tip of Malae Point. Use the shore reference bearings to position yourself on the water. Locate the tall, almost rectangular, flat faced black rock on the cliff face of the point. the buoy is approximately 75 yards straight out from this landmark.

Latitude N 19° 38.620' Longitude W 156° 00.940' 1 buoy DM-34

Depth: 36' 50



□ Goby on Wire Coral

Getting Here: From Honokohau Harbor, go south 2.5 statute miles.

To Find This Mooring: Use GPS. Go south of the sandy beach cove at Old Airport State Park and find the black rock shaped like a shark's dorsal fin on the shoreline. Straight off this rock is the "Old Airport" mooring. Go about 150 feet further south.

Site Attractions: This site is named for the distinctively shaped lava formation on shore and slightly north of it. There's an arch just seaward of the mooring, at a depth of about 45 feet, with a cleaning station (see "Cleaner Wrasse") in it. It's like watching a cleaning station on T.V. Keep going seaward and you'll come to a dramatic drop-off. Advanced divers might do a deep dive here to 115' and see a garden of wire coral. This area is a state Marine Life Conservation District, so anchoring and collecting are not permitted.

Black Point South

1 buoy-DM 03 Latitude: N 20°06.203' Longitude: W 155°52.988'

Depth: 53'

Site Attractions: North of this mooring is a long "chimney" experienced divers can swim through on days of calm weather. All divers should avoid this lava tube on days of strong surge. Two caves lie to the south of this mooring. Deep waters out from the drop-off make this a good spot for viewing big animals.

Shore Reference Bearings	Dist. to Shore
1 333° on the tip of Malae Point	1 30 yds
2 023° on the navigational marker on the hill on Malae Point	2 80 yds
3 Straight in to shore	3 77 yds

To Find This Mooring: Use a GPS or stop on the south side of Malae Point. Look for the navigational marker on the top of the hill which rises a few yards in from the shoreline on Malae Point. Position yourself on the shore reference bearings or find the surface marker to locate this buoy.



Latitude N 19°36.963' Longitude W 155°59.209'

Casa Cave DM-34A

Depth: 38'

Getting Here: Drive 1.7 statute miles south of Kailua Pier.
To Find This Mooring: Use GPS. The mooring is slightly north of the Casa de Emdeko condominiums on shore, whence it is named. It is almost directly in line with the south rock wall of an ancient heiau (Hawaiian Temple) on shore.

Site Attractions: 50ft north (toward Kailua Pier) from the mooring is the entrance to a wide lava tube in about 35ft of water. Abundant Leather Coral, a type of Octocoral, grows around the entrance of the cavern. The cavern is 25ft wide, 35ft long, and 5ft tall. It slopes upward to another exit in 20ft of water. Shy white-tip Reef Sharks rest in or near this cavern. Please don't harass them. Also look for *Menpachi* (Squirrelfish) and *Ula Papapa* (Slipper Lobster) inside this cavern. In the deeper parts of this site (outside the cave) a beautiful, long, undercut "table-top" ledge runs seaward from the mooring and leads to a series of pinnacles around 60ft.

Old Airport

1 buoy-DM 33 Latitude: N 19°38.648' Longitude: W 156°00.990'

49 **Depth: 40'**

Site Attractions: This site is part of the Old Kona Airport marine life conservation district. You are, therefore, bound by all the rules and regulations for marine life conservation districts when you use this area for your recreation activities. Coral cover along the bottom is substantial throughout the area. There are two large pinnacles you can investigate for marine organisms. There is also a sharp drop off into deep water just a few yards west of the mooring. Turtles and manta rays are frequently seen here, and Leaf fish, Banded Angelfish, and Tinker's Butterflyfish abound in size and diversity.

Shore Reference Bearings	To Shore
1 048° on "Shark Rock" straight in to shore	1 80 yds
2 110° on the Royal Kona Resort to the southeast	2 1 3/4 mi
3 Straight in to the shoreline	3 90 yds

Getting Here: Use GPS or travel north out on Kailua Bay for approximately 1 1/4 miles toward the northwest end of the beach at the Old Kona Airport State Park. Look for the big pointed rock commonly known as "Sharkfin Rock" or "Pyramid Rock" jutting up out of the water near the shoreline. When you have located this unmistakable landmark, you have arrived.

To Find this Mooring: Position your vessel so that it is straight out from "Sharkfin Rock" and roughly 10 yards farther north. Line up on the shore reference bearings and locate the buoy.



Leaf Scorpionfish use camouflage to escape detection by predators and prey.

My Notes:

Old Airport •
Sharkfin Rock •

(Horseshoe) Kei Kei Caverns

Latitude: N 20°04.824' Longitude: W 155°52.058' 1 buoy-DM 04

Depth: 51' 10

Shore Reference Bearings	Dist. to Shore
1 140° on the most extended point of land north of Waiakailio Bay	1 400 yds
2 355° on the tip of the most extended point of land north of the mooring	2 800 yds
3 Straight in to shore	3 50 yds

Getting Here: Travel north along the coast from Kawaihae Harbor for approximately 3 1/2 miles. This site lies about 1/3 of a mile north of Waiakailio Bay's north boundary.

To Find This Mooring: Use a GPS or look for the outcropping of small- and medium-sized wash rocks extending in a line straight out from shore. Stop 50 yards south of this line of rocks. Position your vessel on the shore reference bearings and locate the buoy. *May have a surface marker**

Site Attractions: This site is named after a huge, horseshoe-shaped coral reef. Clear water makes conditions optimal for exploring the open water caverns near the shore. Corals and sand patches support abundant populations of fish and other marine life.

Kei Kei Caverns South

Latitude: N 20°04.803' Longitude: W 155°52.038' 1 buoy-DM 05

Depth 42'

Shore Reference Bearings	Dist. to Shore
1 325° on the tip of the wash rock outcropping to the north	1 60 yds
2 45° on the tip of the longest finger of land to the south	2 45 yds
3 Straight from shore	3 100 yds

To Find this Mooring: Use a GPS or look for the outcropping of small- and medium-sized wash rocks extending in a line straight out from shore which will be approximately 80 yards north of this site. Line up on the shore reference bearings. This mooring is about 30 yards south of Kei Kei

Caverns North ("Horseshoe"). Once your vessel is correctly positioned, you should be able to see the surface marker of that mooring 30 yards to the north.

Site Attractions: Honeycomb-like networks of lava tubes creates many small caverns. In calm conditions, this spot is great for cavern diving. If you are not comfortable diving caverns, do not try these small ones! A field of huge boulders and many corals make for a beautiful landscape.



Ulua Caverns

1 buoy-DM 06 Latitude: N 20°04.462' Longitude: W 155°51.861'

11 **Depth: 30'**

Shore Reference Bearings

- 1 Position your vessel so that the long, northernmost cinder cone is between 020° and 035° on your compass.
- 2 027° on the dirt road running down to the water's edge
- 3 Between 067° and 075° on the Kohala Ranch main house

Dist. to Shore

- 1 Far mauka in the Kohala mtns.
- 2 100 yards
- 3 1/3 mile

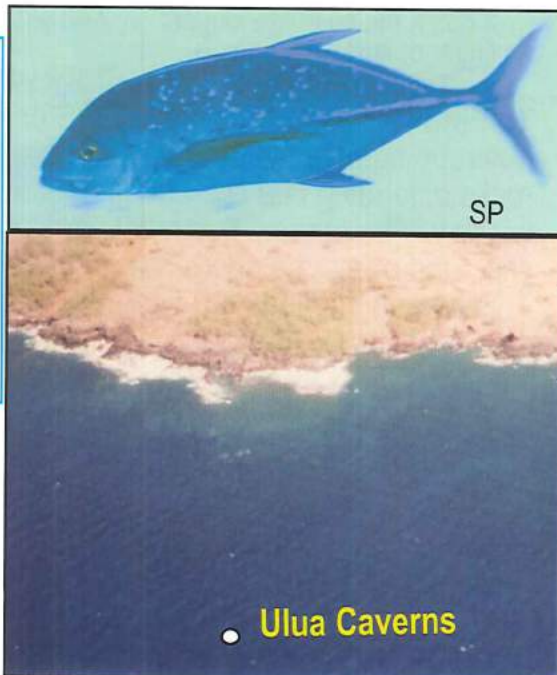
How to Get Here: Head north out of Kawaihae Harbor. This site is located about 3 miles north of Kawaihae Harbor, near Kohala Ranch.

To Find This Mooring: Use a GPS or scan the shoreline for a dirt road among the kiawe trees which runs perpendicular to the shoreline. The road comes right down to the rocks near the water's edge. Continuing straight out from where this road ends, you will find the mooring 100 yards offshore. Line up on the shore references and locate the buoy.

Site Attractions:

The topography here is one of the main attractions with many rock ledges and caverns to explore. A field of huge boulders is the foundation supporting an abundance of coral formations and a wide variety of marine life. A drop-off just west of the mooring allows for deep diving, making this a nice spot for a variety of underwater interests and skills.

□ 'Ulua' are a size class of a family of fishes called jacks. Large jacks are ulua and small jacks are papio. Some jacks can reach over 100lbs. Fishermen use tall poles to catch ulua at night. They are one of the most popular game fishes in Hawaii.



● Ulua Caverns

Disneyland

Latitude N. 19° 38.830' Longitude W 156° 01.186'

DM-32

Depth: 33' 48

Getting Here: Go south from Honokohau Harbor about 2 1/4 miles, following the shoreline. Stop before the beach cove of Old Airport.

To Find This Mooring: After rounding Keahuolu Point (on your chart) go past the "Kaiwi Point" moorings. The last one, "Kamanu" has a surface float (and often a trimaran) on it. About 200 feet mauka (toward Mount Hualalai) of this marker is the mooring.

Site Attractions: This site offers good protection from wind or swells coming from the north. A vibrant coral reef slopes gently to a depth of 50 feet, then more steeply to the sand flat which begins at around 90 feet. On calm days, you can explore the lava tubes and arches in shallow water under the shoreline. Keep an eye out over the drop-off for pelagic species. Although rarely seen, this area provides more than the usual glimpses of large animals, including Marlin, Hammerhead and Whale Sharks, Pilot and Humpback Whales, and Manta Rays. You should take a camera - they'll never believe you!

Latitude N 19° 38.802' Longitude W 156° 01.108' **Air Tanks**
DM-32A

To Get Here: See "Disneyland". Go 200 feet mauka, towards Old Airport.

To Find This Mooring: Use GPS. It's south of the Liliuokalani Children's Center Campground, and north of the Old Airport beach cove. The bottom is 28 feet deep at the mooring. Scrub the top of the ball before you leave and it will be easier to find next time.

□ Cleaner Shrimp



□ **Hawaiian Cleaner Wrasse** eat parasites off of larger fish. (here-a Yellowstripe Goatfish)

Depth: 28'

Site Attractions: Same as Disneyland. On the bottom near the mooring are several discarded steel gas storage cylinders, hence the name. This area is protected as a Fishery Management Area (FMA). It is illegal to collect tropical fish or to feed fish in this zone. Notice how happy the fish are here.

My Notes:

Kamanu

1 buoy-DM 31 Latitude: N 19°38.857' Longitude: W 156°01.308'

47 **Depth: 45'**

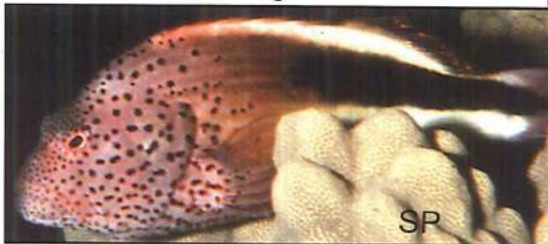
Site Attractions: At this site you will find large fish populations, a sizable pinnacle, rocks, and scattered sand covering the bottom. The steep drop-off along the south face of the point continues at this site. The main attraction, however, is a cavern in toward shore commonly known as "Carousel." This name came about because of the large rock pillar in the middle of the cavern that divers can swim around like a carousel. Do not attempt to explore this cavern unless you are an experienced diver. On days of rough weather, all divers should avoid the cavern due to the dangers caused by strong surge and currents.

Hawkfish start their lives as females and at a larger size turn into males. They perch on fins, waiting to ambush swimming prey.

Shore Reference Bearings	Dist. to Shore
1 255° on the wash rocks at the visible tip of Keahuolu Point	1 200 yds
2 To the sandy beach pocket straight in to the south face shore of Keahuolu Point	2 70 yds
3 Straight in to the nearshore wash rocks	3 30 yds

Getting There: Traveling north out of Kailua Bay for approximately 2 miles, Keahuolu Point will be the first major point you will encounter along the coast once you have passed the Old Kona Airport State Park. Although this location is commonly known as "Kaiwi Point," it has been identified as Keahuolu Point by NOAA Chart 19327. Stay inside the south face of this point. Note: This is a Kona Coast Fisheries Management Area Zone. Collecting and feeding fish is prohibited.

To Find This Mooring: Align your boat on the shore reference bearings and locate the buoy.



Blackside Hawkfish



Arc-eye Hawkfish have 2 color morphs.



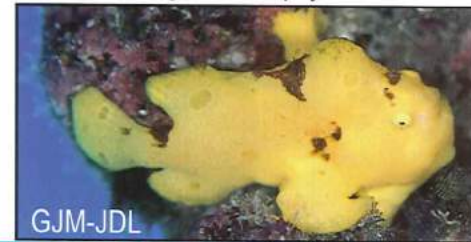
Latitude: N 20°03.895' Longitude: W 155°51.266' buoy-DM 07

Depth: 54' 12

Shore Reference Bearings:	Dist. to Shore
1 310° on the point just north of Waiakailio Bay	1 1 mile
2 120° on the point just north of Honokoa Gulch	2 1 mile
3 Straight in to shore	3 150 yds

How to Get Here: Travel approximately 2 1/2 miles north of Kawaihae Harbor to reach this location. At a speed of 9 knots travel time is about 9 minutes.

To Find This Mooring: Use a GPS or once you have passed Kaiopae Point, continue north for 1/3 of a mile. When you are just beyond the entrance of Kohala By The Sea subdivision, scan the shore for a dirt road coming down from the highway. The road is a very obvious landmark for this site. It runs perpendicular to the shoreline and ends a few feet up from the water's edge. Use the shore reference bearings to help you locate the buoy.



Frog fish come in many colors; from yellow, bright orange, to black. Some have a "lure" to attract prey.



Site Attractions: Frog Rock has a series of interconnecting caverns at depths of 10 to 15 feet. The rooms are large with open entries and exits. Porcupine pufferfish are commonly found in these caverns. This site is not a good dive in rough weather. Strong surge or currents can create hazardous conditions for cavern diving. Therefore, be certain that you have calm weather before attempting to dive these caverns and be aware of any sudden change in conditions. For those interested in doing shore entry dives, this site is also accessible from shore.

Lava Dome Rock

1 buoy-DM 08 Latitude: N 20°03.654' Longitude: W 155°51.058'

13 Depth: 40'

Site Attractions: This site is known for a very distinctive volcanic dome covered with *Porites rus*, a kind of hard coral. This dome starts at a depth of over 85' and has coral growth to within 15' of the surface. When observing this coral, notice that the same species of coral changes in growth form from top to bottom. This is corals' adaption to rough and calm seas. Excellent topography and good visibility make this site fun to explore. Keep an eye out for octopi, shrimps, crabs and a variety of nudibranchs. Lava Dome Rock is a Fisheries Management Area.

Octopi are closely related to snails and are one of the most intelligent invertebrates. They are masters of camouflage and can leave a cloud of ink or bite when provoked. An octopus hole can be found by looking for a pile of shells and crab parts.

Shore Reference Bearings
 1 025° on the northernmost cinder cone visible atop the Kohala Mountains
 2 080° on the white-roofed house near the highway
 3 Straight in to shore

Dist. to Shore
 1 Far mauka on the Kohala Mtns. 2 500 yards
 3 40 yards

Getting Here: This site lies 2 miles north of Kawaihae Harbor. At a speed of 9 knots, travel time to this location is 6 minutes.
To Find This Mooring: Use a GPS or just before you reach Kaiopae Point look for a small cove where a dirt road running perpendicular to the coast line comes down from the highway. When you are facing the shore this road turns to your left as it comes down to the rocks near the water's edge. Line up on the shore reference bearings and locate the buoy.



Lava Dome Rock ●

Kaiwi Point 2

1 buoy-DM 29 Latitude: N19°38.840' Longitude: 156°01.375'

Depth: 40' 46

Shore Reference Bearings
 1 265° on the wash rocks at the visible tip of Keahuolu Point
 2 79° on the green spire roof of the K-Mart building foyer
 3 Straight in to the shore of Keahuolu Point's south face

Dist. to Shore
 1 110 yds
 2 Mauka
 3 16 yds

How to Get There: Travel N. from Kailua Bay for about 2 miles, Keahuolu Point will be the first point encountered after passing the Old Kona Airport State Park. Although this location is commonly known as "Kaiwi Point," it has been identified as Keahuolu Point by NOAA Chart 19327. Stay inside the south face of this point. **Note:** This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.
To Find This Mooring: A white steeple is the airport marker and rises over the land mass of the point, east of the tip of Keahuolu Point. Another shore reference bearing is 80° on the green spire foyer roof of the K-Mart building, to the east and mauka. Position your boat using the shore references and find the buoy.

Site Attractions: The entire area along the south face of Keahuolu Point has many impressive underwater features. Coral and rocks comprise most of the bottom material. New coral growth can be found throughout the area. Fish populations are numerous and abundant. There is also a large pinnacle, a 20-foot sheer cliff wall, and a very rapid drop-off to the south for divers to survey.

Kaiwi Sand Channel 3

Latitude N 19°38.849' Longitude W 156°01.348' 1 buoy-DM 30

Shore Reference Bearings
 1 255° on the wash rocks at the visible tip of Keahuolu Point
 2 071° on the green spire foyer roof of the K-Mart building
 3 Straight into the shore of Keahuolu Point's south face

Dist. to Shore
 1 123 yds
 2 Mauka
 3 40 yds

To Find This Mooring: Align your boat on the shore reference bearings and locate the buoy.

Red Scorpionfish

My Notes:



Depth: 40'

Site Attractions: Aka "Sand Patch" for a large nearby sand patch. Cliff walls and large pinnacles shelter many kinds of marine life. Just S. of the mooring a rapid drop-off brings large animals to this site. Lots of fishes!

Pawai Bay Washrock (Kaiwi Point)

1 buoy-DM 27 Latitude: N 19°38.816' Longitude: W 156°01.410'

45 Depth: 40'

Site Attractions:

Coral rubble and rocks cover the bottom of this site. Coral growth is somewhat sparse but many fish populations thrive here. There are several sheer cliff walls throughout the area which provide shelter for a multitude of marine organisms. Some rock archways and caverns will be found in toward shore and a very rapid drop-off occurs just south of the mooring. Because of the deep waters here it is not uncommon to find larger marine animals roaming the area.

Shore Reference Bearings

Shore Reference Bearings	Dist. to Shore
1 255° on the wash rocks at the visible tip of Keahuolu Point	1 85 yds
2 342° on the white airport steeple to the east of Keahuolu Point	2 275 yds
3 Straight in to the wash rocks of Keahuolu Point's south face	3 20 yds

Getting There: Traveling north out of Kailua Bay for approximately 2 miles, Keahuolu Point will be the first major point you will encounter along the coast once you have passed the Old Kona Airport State Park. Although this location is commonly known as "Kaiwi Point," it has been identified as Keahuolu Point by NOAA Chart 19327. Stay inside the south face of this point. Note: This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find This Mooring: For this buoy, the white steeple referred to is the airport marker which can be seen rising over the land mass of the point, east of the tip of Keahuolu Point. An additional shore reference bearing you can use for this buoy is 080° on the green spire foyer roof of the K-Mart building, to the east and mauka. Position your boat using the shore references and find the buoy.



Crystal Cove

Latitude: N 20°03.220' Longitude: W 155°50.749'1 buoy-DM 09

Depth: 43' 14

Shore Reference Bearings

Shore Reference Bearings	Dist. to Shore
1 355° on the white-roofed building near the highway	1 Mauka
2 037° on the northern-most cinder cone	2 Far mauka Kohala Mtns.
3 Straight to shore	3 220 yards

Getting Here: Travel 1 1/2 miles north of Kawaihae Harbor. Look Mauka for the four large Kohala Mountain cinder cones that appear to run parallel to the shoreline. When you have a compass reading of 037° on the peak of the northernmost cinder cone of the four, you have arrived.

To Find This Mooring: Use a GPS or several wash rocks are situated in the water down from the southernmost of the four visible Kohala Mountain cinder cones. When you are positioned on the mooring, the north end of these wash rocks is about 50 yards south of the mooring site at 075° on the compass. Line up on the shore reference bearings and locate the buoy.



My Notes:

Site Attractions: The cove itself is a popular resting spot for the Hawaiian Spinner Dolphins. Please take care not to drive through the pod or disrupt their rest while you are there. This is illegal and can carry a hefty fine. The dolphins will often approach divers and snorkelers for a playful swim. This is not illegal if they swim with you but avoid touching and do not feed them. Crystal cove is known for a very large sand patch which lies a few yards west of the mooring. Due to the amount of plankton and other nutrients in the water, the visibility is not always clear at this site but because of this, unusual marine life is often seen feeding here. It is not unusual to see Awa and other large fish including schooling Hammerheads at this site as well as a large variety of reef fishes.

	Lat.	Long.:	Depth:
9A Puako	N19° 58.217'	W155° 50.837'	Depth: 40'
9B Secrets	N19° 58.203'	W155° 50.924'	Depth: 35'
9C Pine Tree	N19° 58.052'	W155° 51.309'	Depth: 18'
9D Paniau N.	N19° 56.590'	W155° 51. 595'	Depth: 20'
9E Paniau S.	N19° 57.566'	W155° 51.619'	Depth: 40'

Shore Reference Bearings	Dist. to Shore
1 340° on the tallest dome-shaped lava peak near the edge of the shore's lava rock cliff	1 170 yds
2 075° on the outhouses on the beach to the east	2 400 yds
3 Straight in to the shore's lava rock cliff face	3 14 yds

Depth: 47' 44

Site Attractions: This is a good spot for viewing deep-water animals. There is a sharp drop-off immediately west of the mooring. Closer in to shore you will find corals, boulders, and a few pinnacles. Divers surveying this area will discover a great diversity of marine organisms inhabiting these waters.

Getting Here: Go south 5 statute miles from Kawaihae Harbor. Beginning here, DM-9A through DM-9D are all fairly evenly spaced, each about 1/2 mile apart, along Puako Drive. Puako Drive is a coastal road lined with homes on both sides. Tidepools on a wide tidal flat separate the beachfront properties from the ocean. DM-9E is just over 6 miles from the Kawaihae Harbor entrance.

To Find These Moorings: Use GPS. All of these moorings are close to shore along the ridges and canyons of this scalloped shoreline.

Getting Here: Travel approximately 2 1/3 miles north of Kailua Bay so that you are 1/3 of a mile north of Keahuolu Point (the site north of the Old Kona Airport State Park commonly known as "Kaiwi Point").

To Find This Mooring: Locate the highest peak on the cliff wall that is just north of the Liliuokalani Land Trust Beach. The buoy is approximately 30 yards directly out from this peak. Look inshore over the lava rock cliff for the outhouses on the beach and align them on a 075° compass bearing. Locate the tall dome-shaped lava formation that sits just a few yards back from the edge of the cliff and align it on the 340° compass bearing. Once you have positioned your boat on these references, you should be directly over the buoy. **Do not use this mooring if fishermen are fishing from nearby cliffs.**



JDL

Male Pipefish carry their purple eggs on their bellies (see photo).



JDL

Dragon Morays get their name from their tubular, dragon-like nostrils. Morays can knot themselves to leverage a bite out of a prey item.

My Notes:



JDL

Harlequin Shrimp eat sea stars. They start first with the legs, keeping their victim alive for several days' worth of feeding.



Outhouse



Eel Cove North

1 buoy-DM 25 Latitude: N 19°39.302' Longitude: W 156°01.910'

43 Depth: 30'

Site Attractions:

There is a rapid drop-off into deep water just west of the mooring. N. of the cove is a wide variety of corals and fishes, including schools of Raccoon butterfly fish and large numbers of nesting sergeant majors. Toward shore are small canyon formations worth investigation. A wide assortment of marine life is found here.

Shore Reference Bearings

Shore Reference Bearings	Dist. to Shore
1 300° on the visible tip of Kaiwi Point	1 200 yds
2 150° on the tip of the South point of "Eel Cove"	2 300 yds
3 Straight into shore	3 30 yds

Getting Here: Travel south out of Honokohau Harbor for approximately one mile. Find the cove where Kaiwi Point is the northern boundary. Note: The Kaiwi Point referred to here is according to NOAA Chart 19327. A discrepancy exists between this chart and the location just north of the Old Kona Airport State Park which is commonly known as "Kaiwi Point". This point is "Keahuolu Point" on the chart. Follow the NOAA chart when traveling to this site.

To Find This Mooring: This buoy is located near the north end of the cove. Use the shore reference bearings to find the buoy.



☐ Yellowmargin Moray



☐ Snowflake Moray



☐ Whitemouth Moray



☐ Zebra Moray

Moray Eels lack pectoral fins and scales. They start adult life as males and at a larger size turn into females. Zebra morays have molars, other have canines.

Site Attractions:

Puako / 9A Coral flats surround this mooring and it is at the edge of an interesting drop off. The drop off descends to a sandy bottom where lives a community of garden eels. In the shallower waters there's a Hawaiian green sea turtle cleaning station and sometimes a school of Heller barracuda. In lava formations you can find sponge crabs, cleaner shrimp, nudibranchs, and soft corals.

Secrets Named after a surf spot. The mooring is on a coral flat. There is a nice drop off, with schools of butterfly fish and black durgons. Green sea turtles are often found napping on a high lava finger in the shallows.

Pine Tree The mooring is on a shallow lava finger that has a nice sloping drop off. In the shallow swim-through areas, you will often find sleeping turtles, nudibranchs, and ghost shrimps.

Paniau North and Paniau South Named after Paniau Bay, which in Hawaiian means *still or calm current*. Paniau North is on a lava pinnacle and Paniau South is by a turtle cleaning station. This site has lots to offer: rocky grottos, high lava pinnacles, and big and small swim throughs.

Eel Cove 2 South

1 buoy-DM 26 Latitude N19° 39 249' Longitude W156° 01 893'

Depth 15'

Site Attractions:

A very rapid drop-off lies just west of this mooring for those who enjoy deep diving. Boulders and rubble material blanket most of the substrate in this cove. As with Eel Cove 1, you will find some small rocky canyon formations in toward the shoreline.

Shore Reference Bearings

Shore Reference Bearings	Dist. to Shore
1 173° on the tip of the point at the south end of "Eel Cove"	1 240 yds
2 305° on the tip of the point at the north end of "Eel Cove"	2 260 yds
3 Straight in to shore	3 15 yds

To Find This Mooring: The buoy is on the S. end of the cove. Use shore reference bearings.



Makaiwa Bay (Turtles)

1 buoy-DM 10 Latitude: N 19°56.957' Longitude: W 155°52.259'

17 Depth: 28'

Site Attractions: There is a substantial amount of coral cover over this entire area. It is very important that you take precautions to avoid bumping or breaking these fragile reef formations in any way. Rock ledges, lava rock ledges, archways, and caverns create the underwater topography here. Turtles and a multiplicity of fish often come to feed in this area.

Shore Reference Bearings

Bearing	Dist. to Shore
1 110° on north corner of Mauna Lani Bay Hotel	1 170 yds
2 224° on tip of major land extension to the south	2 360 yds
3 Straight in to shore	3 160 yds

Getting Here: Head North from Anaehoomalu Bay for approximately 2 1/2 miles until you arrive at the Mauna Lani Bay Hotel or 6.7 miles S. of Kawaihae harbor.

To Find This Mooring: Use a GPS or position your vessel so it is 160 yards out from shore and 20 yards farther north than the Mauna Lani Bay Hotel's north corner. Line up on the other shore reference bearings and locate the buoy.

Haunted Cavern (Fingers)

1 buoy-DM 11 Latitude: N 19°56.809' Longitude: W 155°52.339'

Depth: 34'

Site Attractions: This site is also commonly known as "Fingers" because of the long subsurface lava ridges extending seaward from the shoreline. Here you will find rock arches, caverns, and underwater valley formations. Turtles are known to frequent this area. Fish populations are abundant with a wide variety of species inhabiting these waters. Swim carefully around the easily damaged corals which blanket some areas.

Shore Reference Bearings

Bearing	Dist. to Shore
1 90° on the south corner of the Mauna Lani Bay Hotel	1 170 yds
2 Position the most distant tip of wash rocks to the south between 265° and 255° on your compass	2 300 yds
3 110° on the first cinder cone up Mauna Kea's south slope	3 Mauna Kea



Please...for healthy reefs...

Diving Etiquette

42



...look beneath you before diving in... delicate, shallow corals may be below!



...be aware of your buoyancy and dive equipment at all times...



...avoid grabbing the reef, even touching coral can kill it...



...leave shells for hermit crabs to find...as they grow larger, they need to find new homes...

...apply sunscreen 30 minutes before entering the water...

Thank You!

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41

Goatfish get their name from their two barbels under their chins. Barbels are extensions of their lower lip that they use to tickle worms and shrimp from the sand. Male goatfish wiggle their barbels at females in courtship.


 Blue Goatfish

 Manybar Goatfish

Surgeonfish/Tangs have a sharp spine at the base of their tail that they use against predators and each other when competing for seaweed.



Yellow Tangs are the reason why the Kona Coast is called the "Gold Coast". Huge schools could at one time be seen when looking down from high in the mountains.


 Goldring tang

 Black Tang (JV)

Triggerfish/Filefish are named for their first dorsal spine that they use to wedge in a hole. Leathery skin, sharp teeth, and eyes far from their mouths enable them to eat urchins.


 Male Gilded Triggerfish

 Lined Filefish

 Picasso Triggerfish

Pentagon
Latitude: N 19°54.940' Longitude: W 155°53.940' 1 buoy-DM 12

Shore Reference Bearings:

- 1 Line up 080° on the chimney of the Royal Waikoloan's south building
- 2 Line up 070° with both Mauna Kea's north cinder cone and the north chimney of the Royal Waikoloan Hotel
- 3 Straight in to the beach

Dist. to Shore
1 290 yards

2 Mauna Kea

3 220 yards

Depth 18'

18

Site Attractions: Pentagon offers a remarkable lava cavern network, substantial corals, and the best variety of fish in the whole area. This is also a great spot for snorkeling because most of the attractions are in about 15ft. of water.

Getting Here: Head about 220 yards straight out from the beach to Anaehoomalu Bay and just a little to the south where the line of palm trees on the shore ends.

To Find This Mooring: Use a GPS or line up on the shore reference bearings or look for the surface marker to locate this buoy.



My Notes:

Kua Bay.
DM-12.01. Latitude 19 48.779 Longitude. 156 00.478

19 **Depth: 23'**

Site Attractions: This mooring is located near the seaward end of a ridge which juts out from the shoreline ledge. Both sides of the ridge drop down to a sand flat. The ridge is undercut, providing a potential resting place for white-tip reef sharks or turtles. Arches provide habitats for other species. Eagle rays are sometimes seen cruising the nearby sand flat.

Getting Here: Travelling north from Honokohau Harbor, go past Keahole Point 6.8 statute miles (Kua Bay is about 12 miles north of the harbor).

To Find This Mooring: The mooring is on the north side of Kua Bay, which is usually a white sand beach. A period of high surf will remove that sand, leaving black rock.



SP

Spiny Puffer



SP

Male Boxfish

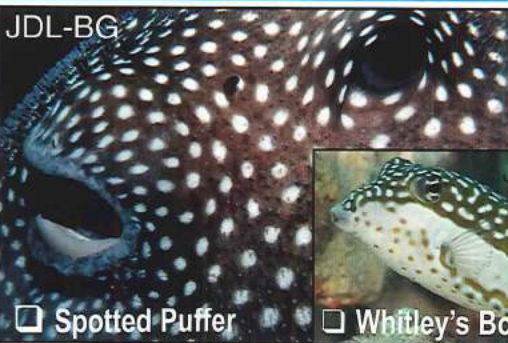


JDL-GJM

Whitespotted Toby (E)

Pufferfish swallow air or water to enlarge their bodies to escape from being eaten. Their skin can stretch 8X more than other fish's skin. Unless cut very carefully, most pufferfish are poisonous to eat. Spines are elongated scales. The green layer in a puffer's eyes protects the fish's sight from UV.

Box Fish are related to pufferfish, but do not inflate. Plates encase the fish in a bony box.



JDL-BG

Spotted Puffer



JDL-GJM

Whitley's Boxfish



JDL-GJM

Shortnose Wrasse

A "terminal phase", dominant male saddleback wrasse has a white stripe behind the pectoral fins.

Like parrotfish, female wrasses are often less colorful than their males.



JDL-GJM

Flame Wrasse



JDL-GJM

Saddleback Wrasse (E)



JDL-GJM

Female Bird Wrasse

Wrasses are closely related to parrotfish. They differ from parrotfish in that instead of a fused beak, they have protruding crooked teeth with which they pluck invertebrates from the coral or sand. Spawning happens with an upward rush of individuals towards the surface. Wrasses change their sex from female to male and form harems. Wrasses sleep in the sand at night, and sometimes a brightly colored tail peeking from the sand gives their location away. Some will dive into the sand when they feel threatened.

40



Kua Bay



DM-KCD

JDL-GJM

Rockmover Wrasse are named for their industrious efforts to build themselves homes. Often seen flinging rocks with their mouths. Juveniles mimic dead leaves and dive into sand when threatened.

Parrotfish are well named for their bright colors and their fused teeth that look like a beak. Young brownish colored parrotfish are often seen swimming in schools. Parrotfish are first females, and, at a large size, the most dominant fish in the school (now called a "harem"), will turn into a male. Males are bright hues of blues and greens, and females are more drab shades of red and brown. The presence of a male will deter females in a harem from turning into males. Pharyngeal mills in their throats help parrotfish grind dead coral they bite off the reef. They are then able to extract algal cells. Often observed "pooping sand", one Hawaiian parrotfish can make 80 pounds of sand a year. They eat seaweed on rocks as adults and invertebrates as juveniles. In reef crevices, they sleep in mucous cocoons at night.



☐ Male Spectacled Parrotfish (E)



☐ Female Spectacled Parrotfish (E) are named for the stripe over their nose that looks like glasses. At one time a reddish-brown female, the fish above is turning into a blue-green male.



☐ Female Stareye Parrotfish



☐ Male palenose parrotfish

(Keahole) Hoover's Tower
 Latitude: N 19°44.422' Longitude W 156°03.333' 3 buoys-DM 12A

Shore Reference Bearings:	Dist. to Shore	Depth: 35'	20
1 110° on the Keahole Airport Control Tower	1 1 mi		
2 Position the bow of your vessel straight on the dirt road just left of the Keahole Airport Control Tower	2 5-8 mi		
3 Straight in to Shore	3 40 yds		

Getting Here: Travel north from Kailua Bay for approximately 8 miles to the north side of Keahole Point. At a speed of 12 knots, it takes nearly 30 minutes to reach this site.

To Find This Mooring: Use a GPS or as you go around Keahole Point, head northeast into the cove. Pass the two pebble beaches and continue to the highest cliff point along the shoreline and stop about 300 yds. from the W. end of the cove. Look for the airport control tower. Just to the left of the tower you should be able to see a huge pile of cinder. Align the bow of your vessel on the center of the pile of cinder so that the airport control tower is slightly to your right.

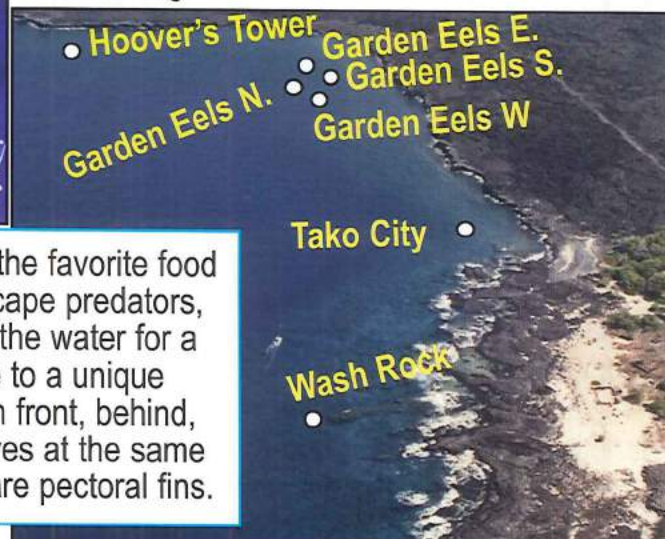
Line up on reference bearings and locate the mooring.



☐ **Flying Fish** are the favorite food of mahimahi. To escape predators, they can sail out of the water for a hundred yards. Due to a unique eye, they can see in front, behind, and under themselves at the same time. Their 'wings' are pectoral fins.

Site Attractions:

"Hoover's Tower" is a pinnacle located about 50 feet north of the buoy. It can be seen 7 feet below the surface at low tide. There is a drop-off shelf 60 to 70 yards from shore at a depth of 40 to 45 feet. Less than 200 years old, the gentle hills and ridges of this site support a surprising amount of healthy cauliflower corals. A field of medium-sized boulders cover the bottom. The local school of spinner dolphins is often seen playing in this cove.



Garden Eels

4 Buoys-DM 12A1, DM 12A2, DM 12A3, DM 12A4

21

12A1 "North" Lat.: N 19° 44.230' Long.: W 156° 03.240' **Depth: 26'**
 12A2 "West" N 19° 44.202' W 156° 03.235' **Depth: 27'**
 12A3 "East" N 19° 44.198' W 156° 03.215' **Depth: 19'**
 12A4 "South" N 19° 44.161' W 156° 03.235' **Depth: 23'**

Site Attractions: These moorings form a diamond pattern around a very popular rubble patch. Manta rays often gather here at night to feed on plankton. In the sand, below the sloping reef, Garden Eels can be seen by the hundreds, rising eerily out of the sand below a depth of 50 feet. To the south, the coral of the sloping reef is pristine, having been spared the damage from south swells by the protection of Keahole Point, the westernmost point of the Big Island. If you encounter manta rays, please respect these majestic creatures by not touching them. Many marine animals such as rays are protected by a mucous coating on their skin which protects them from infection. Even gentle touching can remove this protective coating and leave them susceptible to serious rashes. It can also spook the animal, and ruin the encounter for many. Local dive shops can provide more guidelines for interacting with these wonderful animals.



JDL

Getting Here: Travel N 5.5 statute miles from Honokohau Harbor.

To Find These Moorings:

Locate the black rubble beach on the shoreline where the bay forms a corner near the churning paddles of an aquaculture project at NELHA. The N. and W. moorings are near the steep drop-off. The E. mooring is close to shore, and the S. mooring is further out.

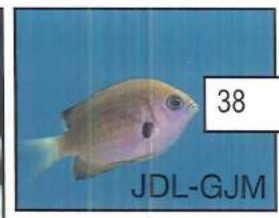
Manta Rays can grow to over 6m. wide. Their cephalic horns guide small crabs and fishes into their throats. Cephalic horns are anterior subdivisions of manta's pectoral fins. This makes them the only vertebrate with 3 functioning pairs of limbs. Individuals can be identified by the pattern of their spots.



SP



SP

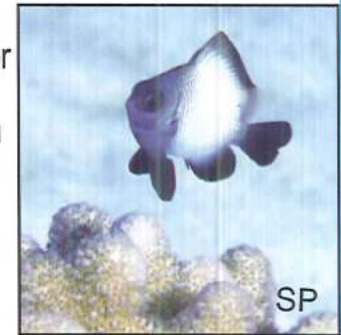


38

JDL-GJM

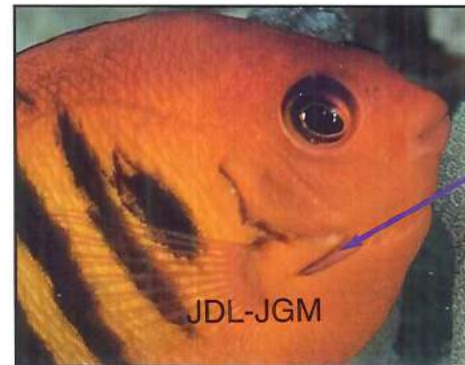
Chocolate-dipped Chromis (E) Blue-eyed Damsel Agile Chromis

Damselfish are noisy, and many of them will create a purring sound when mating, or when a threat comes too close. They are thought to increase the health of reefs from their slovenly eating habits. They eat large pieces of plankton from the water column. They do not digest it very well, and rain these half digested bits of nutrients upon the reefs. To reef inhabitants, this is mana from heaven. Known to chase divers.



SP

Hawaiian Dascyllus(E)

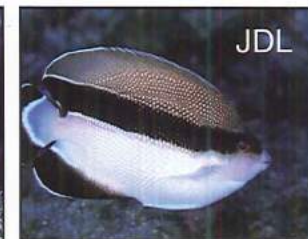


JDL-JGM

Angelfish differ in appearance from butterflyfish with a spine on their gill cover. Angelfish change their sex from females to males. Hawaii does not have large species of angelfish; most Hawaiian angelfish are no larger than a tennis ball. Most are endemic.



JDL



JDL



JDL-JGM

Flame Angelfish (E) Bandit Angelfish (E) Potter's Angelfish (E)

Did you know that 25% of Hawaii's reef fish in the Main Hawaiian Islands are endemic(E), found **nowhere else on earth**? 50% of the fish biomass in the Northwestern Hawaiian Islands is endemic.

Butterflyfish eat corals, plankton, and/or invertebrates. Some of them mate for life and defend a territory for several years. Many butterflyfish have a bar through their eye and a "false eye" black spot on their tail that are meant to confuse predators. Butterflyfish are awake during the day and sleep on the reef at night. While asleep, they have a darker color pattern to disguise themselves from predators.



Tinker's (E)



Teardrop



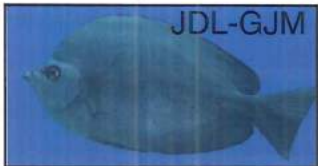
Raccoon



Threadfin



Pennantfish



Thompson's



Bluelined (E)



Milletseed(E)



Multiband(E)



Oval



Ornate



Fourspot



black color morph
 Longnose



Pyramid Butterflyfish at Pyramid Rock

Tako City (Keahole)
Latitude: N 19°43.955' Longitude: W 156°03.467' 1 buoy-DM 13

Shore Reference Bearings

- 1 Line up pebble beach between 150° and 130° on your compass
- 2 210° on the Keahole Point Lighthouse
- 3 Straight into the wash rocks as you face NELH

Dist. to Shore

- 1 50 yds
- 2 400 yds
- 3 30 yds

Depth 35'

22

Site Attractions: A long sand chute drops between two hills creating an unusual scenic phenomenon. The boulders and rubble covering the bottom of this area shelter a large diversity of infant fish, especially in the late summer and early fall. A rapid drop-off into deeper waters is about 30 yards N. of the mooring.

Getting Here: Travel north from Kailua Bay for approximately 8 miles to the N. side of Keahole Point.

To Find This Mooring: Use a GPS or come around to the north side of Keahole Point and stop just before you reach the first pebble beach. Look for the wash rocks which will be in front of you as you face the Natural Energy Laboratory of Hawaii (NELH) complex and stop about 30 yards out from there. Line up on the shore reference bearings.

Washrock (Keahole)
Latitude N 19°43.934' Longitude W 156°03.578' 1 buoy-DM 14

Shore Reference Bearings

- 1 070° on the Keahole Airport Control Tower
- 2 190° on the Keahole Pt. lighthouse
- 3 140° on the closest wash rock out from NELH

Dist. to Shore

- 1 3/4 mi.
- 2 400 yds.
- 3 25 yds.

Depth: 32'

Site Attractions: The boulder and rubble cover provides niches for a wide variety of marine animals. Visibility is usually quite good. There is a steep drop-off 35yds. N of the mooring.

Decoy Scorpionfish has a dorsal fin colored like a smaller fish.



To Find This Mooring: Use a GPS or come around the north side of Keahole Point. Find the independent wash rock closest to you and farther from the shore than the other wash rocks which lie just out from the shoreline, north of the Natural Energy Laboratory of Hawaii (NELH) complex. The mooring is roughly 25 yards out from this rock. Line up with the shore references and locate the buoy.

Pipe Dreams

DM14A Latitude N 19° 43.747' Longitude W. 156° 03.735'

23 **Depth: 39'**

Site Attractions: This site is located at Keahole Point, the westernmost point of the Big Island. The Natural Energy Laboratory of Hawaii (NELH) is located here because of its close proximity to deep water: the drop-off is very steep here. Many pipelines traverse the reef here and disappear over the drop-off into the abyss. This gives the site some artificial reef quality and provides habitat for many animals. The site is very exposed to surf and currents, which can make conditions unsafe for diving.

Getting Here: Travel north 4.7 statute miles from Honokohau Harbor.

To Find This Mooring: Use GPS. Just north of the extreme point of Keahole, find the buoy in 39 feet of water. Please be courteous of fishermen fishing from shore.

Black Hole

DM-14B Latitude N 19° 42.932' Longitude. W 156° 03.238'

Depth: 55'

Site Attractions: This mooring sits on top of a ledge which steps from 50 feet down to 80 feet deep. Just seaward of the pins, an "L-shaped" lava tube drops down and out through this step. It is home to a variety of crustaceans, schools of Pyramid and Banner Butterflies hover near the drop-off. This site is for advanced divers due to the depth. Please respect local spearfishermen who may hunt in this area.

Getting Here: Travel north from Honokohau Harbor about 3.6 statute miles. **To Find This Mooring:** Use GPS. The airport control tower is visible to the northeast. This site is relatively far offshore and about 3/4 mile south of Keahole Point.



Protected Species

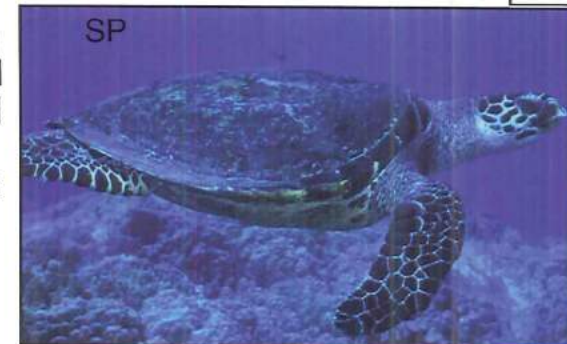
Turtles, Corals

36

Sea Turtles

Five species of sea turtles visit Hawaiian waters: Green Sea turtles (*Honu*), Hawksbill Sea turtles (*Ea*), Loggerhead turtles, Pacific Ridley turtles, and Leatherback turtles. Sea Turtles take 25 years to reach maturity, and nest from May to August.

Harming or killing turtles in Hawaii is illegal. Ocean users should also be aware that chasing, touching, feeding, and riding turtles is illegal and puts these animals under stress. Any act of harassment or harm can result in penalties of \$25,000 (civil) and/or \$50,000/imprisonment (criminal).

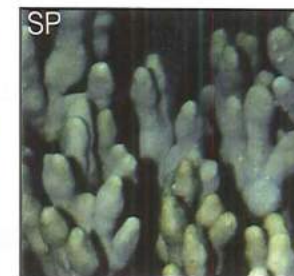


Hawksbill Turtles are the second most common turtle seen in Hawaii. They lay eggs on Hawaii Island. They were not eaten, but their shells were used for jewelry. The mottled patterns on fins make turtles difficult to see when they are resting on reefs.

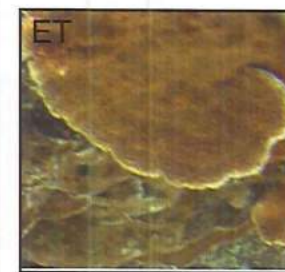
Corals



Lobe Coral



Finger Coral (E)



Rice Coral (E)

Stony corals are living animals. Hawaii has 9 common species of stony corals. Stony corals grow very slowly (some 1 or 2 inches a year!), and reefs damaged by anchors or careless actions may take decades to recover, if ever. State law prohibits taking, breaking, or damaging any live stony coral, including any live reef or mushroom coral to which any type of marine life is attached. (HRS 188-68) Most violations are subject to a fine of up to \$500 and/or thirty days in jail, plus up to \$100 per specimen taken illegally.

DM-24E "H. In." Lat. N 19° 40.076 Long. W 156° 01.739 **Depth: 18'**
DM-24F "H. Mid." N 19° 40.072 W 156° 01.747 **Depth: 16'**
DM-24G "H. Out." N 19° 40.064 W 156° 01.768 **Depth: 20'**

Site Attractions: This site is sometimes called "Manta Ray Bay" because mantas were once seen here. These 3 moorings are well protected from south swells. They are all in 16-20 feet of water but divers have close access to depths of 100 feet or more. The bottom has large boulders and abundant finger coral. There are large schools of Raccoon Butterfly and Goatfish hovering over the reef. Over the drop-off near the sandy bottom watch for Garden Eels, Green and Hawksbill Turtles, and Eagle Rays. Lucky divers have even been visited by the pod of Hawaiian Spinner Dolphins that hangs out by the green buoy. This site is adjacent to the harbor entrance: avoid the boat channel.

Getting Here: Go south from Honokohau Harbor about 1 tenth of a mile. Stay close to shore but watch out for swimmers or divers from shore or other boats.

To Find These Moorings: Use GPS. The inside mooring is just seaward of a channel leading to the popular crescent swimming beach. The middle mooring is just off the triangular aviation marker on the rocks. The 3 moorings are each about 100 feet apart. The depth of the bottom is 16-20 feet at the moorings.

Spinner Dolphins rest in shallow bays during the day and hunt for fish and squid at night. Named for the acrobatic torpedo-like spinning that they do while jumping out of the water. They often ride bow wakes.



My Notes:

Getting Here: From Honokohau Harbor, travel north about 2.8 statute miles. Go past the stand of Mangrove and the long white beach.

To Find This Mooring: Use GPS. Dotti's is close to shore, just north of a shallow reef which usually has waves breaking on it. The bottom is 28 feet deep at the mooring.

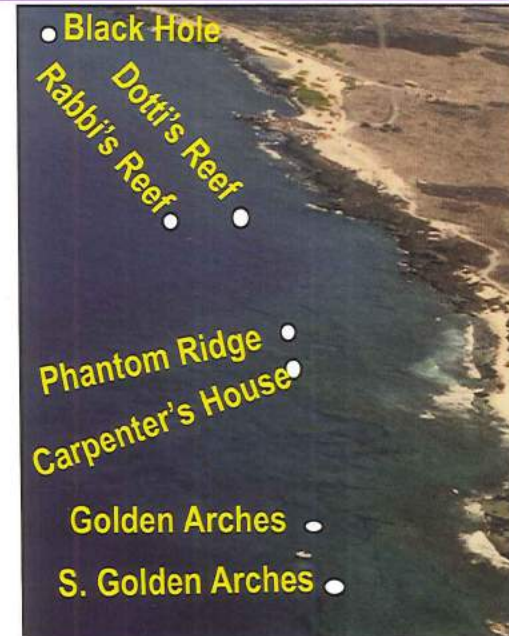
Site Attractions: This site is named in honor of Dotti Primrose, "America's Most Outspoken Advice Columnist" (Weekly World News). Interesting topography dots the landscape between 35 and 50 feet deep. Look for eels, octopi, and frogfish (Antennarius Commersoni).

Rabbi's Reef (Lionfish Arch)

Latitude N 19° 42.359' Longitude W 156° 03.056' DM14D

Site Attractions: There is an arch on each side (north and south) of this mooring. Harlequin Shrimp and Hawaiian Turkeyfish have both been seen at this site in the past. Please do not collect specimens at any of these sites. Leave them wild and free for all to enjoy, and for the health of the environment. This site is named for Rabbi Allen Frehling, who generously donated to the Adopt-A-Buoy Program. **Depth: 47'**

Getting Here: See "Dotti's Reef"
To Find This Mooring: Use GPS. This site is just seaward from Dotti's Reef. The mooring sits in 47 feet of water, about 200 feet north of the ridge described in "Phantom Ridge" ("High Rock"). While doing a safety stop at this or any day-use mooring, feel free to grab a brush or scrub pad and clean the top of the ball. It will help you or the next person to find the mooring.



Phantom Ridge (High Rock)

1 buoy-DM 15 Latitude: N 19°42.295' Longitude: W 156°03.016'

25 **Depth: 38'**

Site Attractions:

A massive ridge just N. of the buoy is capped by a pinnacle rising to within 10ft of the water's surface. The ridge and pinnacle provide shelter for a host of different marine organisms (Octopi and coral heads). Please do not handle the octopi! Rocky outcroppings.

Shore Reference Bearings

1 005° on the Keahole Airport Control Tower

2 025° where the sand meets the rocks at the north end of the beach

3 Straight in to the beach

Dist. to Shore

1 2 miles

2 140 yds

3 155 yds

Getting Here: This site is almost 3 mi. N of Honokohau Harbor. As you travel N. from Honokohau you will pass Wawahiwaa Point where the tall stand of Mangrove trees is growing (aka Pinetrees). Continue on just less than 1 mi. N. Stop when you are near the beach's north end where the sand ends and rocks begin. Note: This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find This Mooring: Use a GPS or position your boat so that it is a few yards S. of the beach's N. end. Use shore reference bearings.

Carpenter's House

1 buoy-DM 16 Latitude: N 19°42.283' Longitude: W 156°03.009'

Depth: 34'

Site Attractions:

Close to shore explore a maze of canyons, arches, and small caves. Many small and large pinnacles, rocky outcroppings, and corals can be found throughout the area. Lobsters, crabs, shrimp, pufferfish, and a wide variety of other marine life are found here.

Shore Reference Bearings

1 010° on the Keahole Airport control Tower

2 045° where the sand meets the rocks on the N. end of the beach

3 Straight in to the beach

Dist. to Shore

1 2 mls

2 180 yds

3 150 yds

To Find This

Mooring: Use a GPS or position your vessel so that it is about 180 yards south of the north end of the beach where the sand and rocks meet. Use the shore reference bearings to help you locate the buoy.



JDL-GJM

Longfin Anthias

Latitude. N 19° 40.302' Longitude W 156° 01.791' **Turtle Pai**
DM 24C

Depth: 21' 34

Getting Here: Go north from Honokohau Harbor about a tenth of a mile. Watch out for turtles and divers from other boats.

To Find This Mooring: Use GPS. This buoy is only about 200ft SE of "Turtle Pinnacle". It is right on the edge of the shallow shelf outside Kaloko Honokohau National Historical Park in 21 ft of water.

Site Attractions: This mooring is the shallowest of all the moorings with access to "Turtle Pinnacle". It is a great shallow dive for snorkelers or beginner divers. Because of its proximity to Honokohau Harbor, boat traffic is a concern. Use a dive flag and stay out of the boat channel. Be a diver, not a speed-bump!

Turtle Heaven

Latitude N 19° 40.223' Longitude W 156° 01.750' DM 24D

Depth: 22'

Getting Here: A stone's throw north of the harbor mouth.

To Find This Mooring: Use GPS. This mooring is on a pinnacle just outside of an underwater grotto that is usually visible from the surface.

Site Attractions: This dive is great for all levels of snorkelers and divers. Green Sea Turtles and the occasional Hawksbill Turtle can often be found resting, feeding, or just cruising in this area. It is illegal to do anything which causes them to change their behavior, so be nice. Toward shore from the mooring the ledge is riddled with arches and caves. This is the closest site to the harbor entrance and common sense should be used when diving here. Don't assume that captains are looking out for divers as they enter or leave the harbor.



Green Sea Turtles were once hunted for their meat, which was made into soup. They eat mostly seaweeds and jellyfish and nest in the Northwestern Hawaiian Islands. Young turtles spend several years out at sea before returning to the Hawaiian Islands.

Terrapin Station

DM24A-1 Latitude: N 19° 40.330' Longitude W 156° 01.875'

33 Depth: 35'

Site Attractions: A pinnacle rises from 50 feet to 25 feet of depth a short swim south of the mooring. This is a popular resting and cleaning station for Green Sea Turtles. Schools of tangs and butterfly fish can sometimes be seen grazing on the backs of turtles, keeping the algae under control. A clean turtle is a happy turtle. A large Yellow-margin Moray Eel named "Saddam" lives in the pinnacle.

Getting Here: From Honokohau Harbor, go north a mere 2 tenths of a mile. Watch for the bubbles of divers who may be diving from one of the nearby moorings.

To Find This Mooring: Use GPS. The mooring is about 200 feet north of Turtle Pinnacle in 35 feet of water.

Turtle Pinnacle

1 buoy-DM 24B Latitude: N 19°40.305' Longitude: W 156°01.830'

Depth: 32'

Site Attractions:

This is an excellent site for finding green sea turtles. There are also some attractive pinnacles to explore. Corals and a wide variety of other marine organisms can be found throughout this area. Due to the fresh water flowing out of the harbor the temperature here can be a bit colder than other sites along this part of the coast. Be sure to bring enough exposure protection when diving this spot.

Shore Reference Bearings	Dist. to Shore
1 Align Honokohau Hbr. entrance between 130° and 105°	1 180 yds
2 177° on the most extended point of shore to the south	2 250 yds
3 Straight in to the beach	3 250 yds

Getting Here: Come straight out of Honokohau Harbor on a heading of 330° to 300° for approximately 0.3 mile.

To Find This Mooring: Line up on the shore reference bearings and locate the buoy.

Note: Because this site is located near the mouth of Honokohau Harbor, be especially cautious of boat traffic.



Latitude: N 19°42.203' Longitude: W 156°03.007' Golden Arches 1 buoy-DM 17

Depth: 40' 26

Shore Reference Bearings	Dist. to Shore
1 Align the Mangrove tree stand to the south between 140° and 130°	1 3/4 mi
2 Straight in to the beach	2 85 yds
3 Look to the southeast for the underwater rock formation	3 13 yds

Getting Here: Head north out of Honokohau Harbor going about 3/4 of a mile past "Pine Trees," where the tall stand of mangrove trees is



JDL-JEM
Bicolor Anthias

growing on Wawahiwa Point. **Note:** This is a Kona Coast Fisheries Management Area Zone; collecting and feeding fish is prohibited. **To Find This Mooring:** Use a GPS or line up on the shore reference bearings. Find the rock formation that rises to within 7 to 10ft of the surface of the water. The mooring is 13yds northwest of the rock formation.

Site Attractions:

There is a rock arch located about 50ft N of the mooring. A field of boulders, scattered coral heads, and rubble provides a variety of different habitats for marine life. Golden Arches 2 is a short swim to the south.

Anthias are closely related to large groupers. They start adult life as females and later turn into males.

South Golden Arches 2

Latitude: N 19°42.176' Longitude: W 156°02.991' 1 buoy-DM 17A

Depth: 26'

Shore Reference Bearings	Dist. to Shore
1 04° on the Keahole Airport Control Tower	1 2 1/4 mls
2 170° on the tip of the land extension to the south	2 100 yds
3 Straight in to shore	3 100 yds

To Find This Mooring: Use a GPS or position your vessel using the shore reference bearings and locate the buoy.

My Notes:

Site Attractions: This site is technically *The Golden Arches*. Just out from the mooring is a large rock arch. Divers can swim north to the site of Golden Arches 1, or northwest out toward the drop-off where you will find a huge pinnacle sitting on the verge of the drop-off shelf. Numerous marine organisms find shelter on the pinnacle's rock face.

Pyramid Pinnacle 1 (Wawahiwaa Point)

1 buoy-DM 18 Latitude: N 19°41.551' Longitude: W 156°02.775'

27 **Depth: 65'**

Shore Reference Bearings	Dist. to Shore
1 025° on the center of the mangrove tree stand	1 200 yds
2 100° on the extension of wash rocks to the south	2 120 yds
3 Straight in to shore	3 57 yds

Site Attractions: This deep dive has a rapid dropoff and large populations of fishes.

Getting Here: Travel north from Honokohau Harbor for approximately 2 mi. until you reach "Pine Trees"; an easily identifiable stand of tall mangrove trees growing on the point. This is Wawahiwaa Point.

Note: This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find This Mooring: Use a GPS or head around to the outside of the point and stop. Do not go around to the point's N face or you will have gone too far. This mooring is anchored in a boulder at the drop-off line and is a few feet farther N than the inner mooring, also located on the outside of Wawahiwaa Point. Use shore reference bearings.

Pyramid Pinnacle 2

1 buoy-DM 19 Latitude: N 19°41.552' Longitude: W 156°02.742'

Depth: 38'

Shore Reference Bearings	Dist. to Shore
1 Align the four underwater pinnacles between 330° and 270°	1 10 yds
2 010° on the center of the mangrove tree stand	2 200 yds
3 Straight to the wash rocks on the shoreline	3 20 yds

Site Attractions: The site was named for a pinnacle to the S. of the mooring where a school of pyramid butterflyfish live. Smaller pinnacles and a few small lava tubes can be explored at this site. The caves are dangerous during high surf. A sharp drop-off is about 80 ft. W. of the mooring. This site is good for snorkelers because the pinnacles rise to 10 ft. of the surface.

To Find the Mooring: Use a GPS or this buoy is a few feet farther south and closer to shore than the outer mooring, also located on the outside of Wawahiwaa point. Once you have reached the outside of the point, stop and begin lining up on the shore reference bearings. Four pinnacles can be seen just below the water's surface. The buoy is about 16 yards south of the southernmost pinnacle.



Kaloko Arches 1 (Ledges)

Latitude: N 19°41.019' Longitude: W 156°02.152' 1 buoy-DM 24A

Depth: 43' 32

Shore Reference Bearings	Dist. to Shore
1 315° on the tall mangrove trees on Wawahiwaa Pt to the North	1 1 mi
2 045° on the palm tree grove on the beach of the Kaloko National Park	2 280 yds
3 Straight in to shore	3 280 yds

Getting Here: Travel approximately one mile north of Honokohau Harbor. The "Kaloko Light Industrial Park" will be just to your right if you were on the buoy looking back at the shore.

The palm tree grove on the beach of the Kaloko National Park is another landmark.

To Find This Mooring: Use a GPS or of the two buoys at this site, Kaloko Arches 1 is the outer mooring. Position your vessel and locate the buoy by using shore reference bearings.

Site Attractions: There are beautiful and unique rock outcroppings and lava formations. A gentle drop-off levels out into a rubble and sand substrate at about 90 feet. Divers and snorkelers can take a short swim from here toward the inshore mooring to survey the miniature canyons and rock arches.

Kaloko Arches 2

Latitude: N 19°40.991' Longitude: W 156°02.192' 1 buoy-DM 24

Depth: 35'

Shore Reference Bearings	Dist. to Shore
1 040° on the center of the palm grove on Kaloko National Park beach	1 300 yds
2 110° on the wash rocks south of the Kaloko National Park	2 30 yds
3 310° on the mangrove tree stand on Wawahiwaa Point to the north	3 1 mi

To Find this Mooring: Use a GPS or of the two buoys at this site, Kaloko Arches 2 is the nearshore mooring. Use the shore reference bearings to locate the buoy.

Site Attractions: Small and large rock formations, miniature canyons, and a few rock arches create this unique underwater terrain. On calm days the inshore caverns can be explored. Dive these areas with caution and beware of changing currents. Plenty of coral and other marine life populate the area. Take care not to disturb fragile corals and marine life here.



Freeze-Face Cave
DM 23A

Latitude N 19° 41.425' Longitude. W 156° 02.365'

Latitude N 19°41.483' Longitude W 156°02.582'

Skunk Hollow 1
1 buoy-DM 20

31 **Depth: 23'**

Site Attractions: Small pinnacles near the mooring provide a habitat for a multitude of fish and invertebrates. Starting at 50 feet, the reef drops off steeply to a sand bottom at a depth of about 90 feet. Bonefish, or "Awa", come to the edge of the reef to utilize the cleaning services of cleaner wrasse. If it's calm enough, stick your head into a lava tube under the shoreline and you'll see how this site got its name: the fresh water flowing out of these conduits is cold.

Getting Here: Go north from Honokohau Harbor about 1 1/4 miles.

To Find This Mooring: Use GPS. This mooring is just west of the bend in the coastline where it turns west. Check the chains or cables and shackles at the bottom of the mooring to make sure your boat will wait for you.

Shore Reference Bearings	Dist. to Shore
1 Align the mangrove tree stand between 350° and 340°	1 350 yds.
2 Straight in to shore	2 20 yds

□ Cornet Fish



Getting Here: Travel north from Honokohau Harbor for approximately 2 miles until you reach the south facing shore of the area commonly known as "Pine Trees". This location is easily identifiable for miles around by the stand of tall mangrove trees growing on the point. this unique looking site is Wawahiwaa Point. Note: this is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find This Mooring: Use a GPS or stop just inside the south face of Wawahiwaa Point. Line up on the shore the reference bearings and locate the buoy. Note: this buoy is within 80 feet of Skunk Hollow 2, which is farther out from shore in deeper water. A wash rock is just inland of these moorings.

Depth: 32' 28

Site Attractions: A good variety of fish and other marine life can be found here. Rocky outcroppings and boulders are scattered about the bottom. Coral growth is sparse but there are some nearby lava tubes and a drop off to explore. The best feature of this dive site is that the variety of underwater attractions are all in close proximity to each other and can be seen in a short swim of the area.

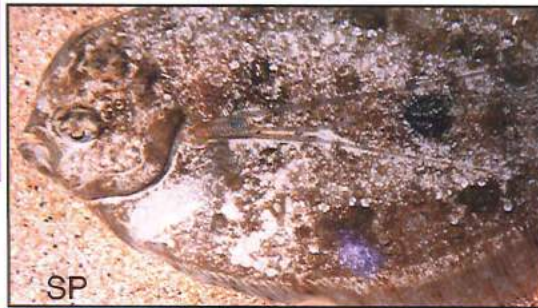
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DM23B Latitude N 19° 41.154' Long. W 156° 02.099'

Depth: 33'

Site Attractions: This mooring lies just inshore of a large sand patch. Domino Damsel fish, Peacock Flounder, and Helmet Shells inhabit the sandy environment. The deep side of the sand patch is 65ft deep. Surrounding the mooring is healthy coral reef, and in shallow water (20 feet) are some large arches.

Getting Here: Travel North from Honokohau Harbor 1 1/4 miles. Just past Kaloko Point, look for a fishpond with a seawall and some palm trees.
To Find This Mooring: Use GPS. Find the big sand patch (light blue water) and look inshore ("mauka") of it. The depth of the bottom is 33 feet at the mooring.



□ **Peacock Flounder's** right eye moves over its forehead and close to its left eye at a young age.

My Notes:

Latitude N 19°41.466' Longitude W 156°02.588' 1 buoy-DM 21

Depth: 40'

Shore Reference Bearings	Dist. to Shore
1 300° on the visible tip of Wawahiwaa Point	1 60 yds
2 350° on the center of the tall mangrove tree stand	2 400 yds
3 Straight in to shore	3 70 yds

Site Attractions: This buoy is situated near a drop-off and is a great deep dive. The nearby lava tubes house a wide variety of marine life.



□ Male Psychedelic Wrasse

Getting Here: See Skunk Hollow 1.
To Find This Mooring: This mooring is 80ft more offshore than Skunk Hollow 1.



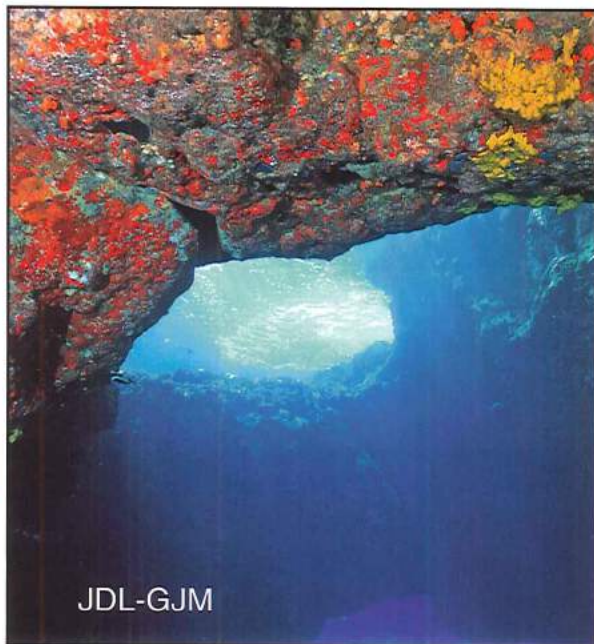
29 **Depth: 40'**

Shore Reference Bearings	Dist. to Shore
1 115° on the visible tip of Wawahiwaa Point	1 60 yds
2 155° on "Lone Tree"	2 75 yds
3 Straight in to shore	3 70 yds

Getting Here: Travel north from Honokohau Harbor for approximately 2 miles until you reach the area commonly known as "Pine Trees". This location is easily identifiable for miles around by the stand of tall mangrove trees growing on the point. This unique looking site is Wawahiwaa Point.

Note: This is a Kona Coast Fisheries Management Area Zone where collecting and feeding fish is prohibited.

To Find This Mooring: Use a GPS or as you approach Wawahiwaa Point where the tall mangrove trees are growing, head to the inside of the point's south face. Position your vessel using the shore reference bearings and locate the buoy.



JDL-GJM

Site Attractions: This is a great winter spot for boats because it is protected from the northwest swells. In addition to safety, this site offers two caves you can swim through. "Skull Cave" looks like the eye sockets of a giant skull and divers can swim in one eye and out the other. "Suck 'Em Up" cave, however, can be dangerous to unsuspecting divers. There is a very strong surge here which can suck you into the cave, possibly causing injury or death. Do not attempt to swim in or around this cave without first having received proper guidance from an experienced diver who knows the entire area. Once you have been shown the opening which is the correct entry for "Suck 'Em Up" cave, you can swim through that end and get propelled out the other opening by the current. Fun!

My Notes:

Shore Reference Bearings	Dist. to Shore	Depth: 40'	30
1 000° on "Lone Tree"	1 90 yds		
2 Align the underwater rock finger between 020° and 010°	2 23 yds		
3 Straight in to shore	3 60 yds		

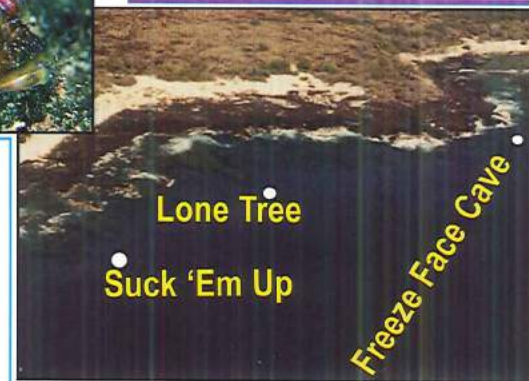
Getting Here: See **Suck 'Em Up**.
To Find This Mooring: Use a GPS or once you are inside the south face of Wawahiwaa Point head in toward shore to the end of the line of trees on the beach. Line up on the shore reference bearings. The "Lone Tree" is the most southern in the line of trees along the shore and stands a few yards apart from the others. Locate the underwater rock formation that is 23 yards northeast of the mooring. The buoy should be easily visible from here.



JDL-GJM

Hawaiian Lionfish (E) are scorpionfish and are one of the most beautiful, most venomous fishes on the reef. The long spines carry a neurotoxin that can sting through gloves. A fish will use its long pectoral fins to corral shrimp and crabs closer to its mouth.

Site Attractions: At this location corals and boulders are scattered about the bottom and many fish populate the area. Near the shore, there is a cavern with large skylights through the top. The main attraction, however, is a big rock arch about 23 yards northeast of the mooring. This site is also known simply as "Big Arch" because of this prominent underwater feature. It can be seen from the subsurface and appears to be a large submerged rock finger. The arch, therefore, is probably the best landmark to use in finding this buoy.



Lone Tree

Suck 'Em Up

Freeze Face Cave

My Notes: