

Okeanos Explorer ROV Dive Summary

| Dive Information | | | |
|---------------------------|--|--|--|
| Dive Map | NAME MARKET MAYER HAVE MAYER M | | |
| Site Name | North side of Wake Island (#7) | | |
| Expedition Coordinator(s) | Brian RC Kennedy | | |
| ROV Lead(s) | Dan Rogers | | |
| Science Team Lead(s) | Chris Kelley and Jasper Konter | | |
| General Area Descriptor | Wake Atoll unit of the PRIMNM | | |
| ROV Dive Name | | | |
| Cruise | EX-16-06 | | |
| Leg | 0 | | |
| Dive Number | 08 | | |

| Equipment Deployed | | | |
|--|--|------------------------------|-------------------|
| ROV | Deep Discoverer (D2) | | |
| Camera Platform | Seirios | | |
| | 🔀 СТD | 🔀 Depth | Altitude |
| | Scanning Sonar | USBL Position | Heading |
| ROV Measurements | Pitch | Roll | HD Camera 1 |
| | HD Camera 2 | Low Res Cam 1 | Low Res Cam 2 |
| | Low Res Cam 3 | Low Res Cam 4 | Low Res Cam 5 |
| Equipment Malfunctions | None | | |
| | Dive Summ | ary: EX1606_DIVE08 | |
| | In Water: | 2016-08-09T21:27:10.1860 | 000 |
| | | 19°, 19.887' N ; 166°, 35.90 |)8' E |
| | Out Water: 2016-08-10T04:31:50.783000 | | |
| | | 19,19.005 N,100,50.5. | 19 E |
| ROV Dive Summary | Off Bottom: 2016-08-10T03:38:23.647000 19°, 19.826' N ; 166°, 36.230' E | | |
| (from processed ROV data) | On Bottom: 2016-08-09T22:29:11 571000 | | |
| | on bottom. | 19°, 20.033' N ; 166°, 36.09 | 97' E |
| | Dive duration: | 7:4:40 | |
| | Bottom Time | 5.9.12 | |
| | | 1024.2 | |
| | Max. depth: | 1034.3 m | |
| Cresial Notas | | | |
| Special Notes | | | |
| | Name | Affiliation | Email |
| | lachar Kantar | Lipivorcity of Howaii | jkonter@hawaii.e |
| Scientists Involved (please provide name, | Jasper Konter | | ckellev@hawaii.ed |
| location, affiliation, email) | Kelley Chris | University of Hawaii | u |
| | Amy Baco- | | abacotaylor@fsu.e |
| | Taylor | Florida State university | du |



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|--|---------------------|---|---|--|----|
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| Abby Lapointe University of Hawaii du This was the first of two shallower dives targeting the precious coral resources Image: Construction of the precious coral resources | | | | abbylap@hawaii.e | |
| This was the first of two shallower dives targeting the precious coral resources | | Abby Lapointe | University of Hawaii | du | |
| and tishes around Wake Island Nothing is known about the present of | | and fishes around Wa | wo shallower dives targeting the ake Island Nothing is known abo | precious coral resources | |
| commercially valuable species of coralliids, isidids, antipatharians, and | | commercially valuable species of coralliids, isidids, antipatharians, and | | | |
| parazoanthids, nor even about the deeper fish species inhabiting the island | | parazoanthids, nor even about the deeper fish species inh | | s inhabiting the island | |
| slope. While no species in any of the coral families are known to have been | | slope. While no species in any of the coral families are known to have been harvested off Wake Island, precious corals are a fishery across the Pacific un the responsibility of NOAA Fisheries and therefore additional information or | | | |
| the responsibility of NOAA Fisheries and therefore additional information on | | | | | |
| their distribution and abundance in any of the US EEZs is valuable for improving | | their distribution and abundance in any of the US EEZs is valuable for im | | s is valuable for improving | |
| Purpose of the Dive their management. These data are also important to the Deep Sea Coral | Purpose of the Dive | their management. T | These data are also important to | the Deep Sea Coral | |
| Research and Technology Program. The objective of this dive is therefore to | | Research and Techno | logy Program. The objective of t | his dive is therefore to | ., |
| objective of documenting the deeper fish community on the slopes. Our initial | | objective of documer | nting the deeper fish community | the deeper fish community on the slopes. Our initial | |
| intent was to begin at a depth of 600 m and transect up from there as shallow as | | intent was to begin at a depth of 600 m and transect up from there as shallow as | | | |
| possible, potentially up to 250 m. However, the slope is so steep in that depth | | possible, potentially u | up to 250 m. However, the slope | is so steep in that depth | |
| range that survey those depths would have put the ship too close to the reef. We therefore modified the plan to begin at just over 1,000 m and transect up to | | range that survey the | ose depths would have put the sh ad the plan to begin at just over 1 | up too close to the reef. | |
| between 500-600 m. | | between 500-600 m. | | | |



| | floor (745m). | (Narelia sp.) was sampled just prior to leaving the sea |
|-------------------------|-----------------------------|---|
| | number of sponges, and s | everal types of corals (primnoids, plexaurids, and |
| | ctenophore. On the more | massive layered carbonate we observed a small |
| | the cobbles and boulders | . Other observations included a feather star and |
| | hosted a number of sea c | and a possible scopelarchus sp. The sandy terrain also |
| | lophiid (Sladenia sp), a sh | ark (Odontaspis ferox), a ray (Plesiobatis daviesi), an oil |
| | bythiids), codlings (Laemo | onema robustum? and possibly Luciobrotula sp), a |
| | (Aldrovandria sp, Pyramo | don sp, various macrourids, ophidiids, and suspected |
| | number of eels (Bathyuro | oconger sp and 2 species of Bathyconger), eel-like fishes |
| | Particularly on the sandy | and rubble slopes, we focused on fishes including a |
| | fish and shrimp (Nemator | carcinus sp. Heterocarpus sp. and Glypphocarangon sp. |
| | approximately 745m, wei | the most commonly observed animals were a variety of |
| | the surface presumably; k | carst). The final depth on the seafloor was |
| | near the end of the dive p | ootentially also due to carbonate dissolution (while at |
| | had a very uneven appear | rance due to the large shell and coral fragments, and |
| | thin layer of black coating | g (presumably Mn) further from any contact. The layers |
| Description of the Dive | was yellow-ish near conta | acts with the surrounding sand, but covered in a very |
| | we entered more of the r | ocky, layered terrain. The layered sediment (limestone) |
| | limestone). Close to the s | econd waypoint (near 900m), the gradient increased as |
| | cemented shell and coral | fragments (large fragments, grain-supported |
| | bathymetry was actually | the edge of a rocky outcrop of layers made from |
| | rockier down slope "strea | ms". The ridge structure observed in multibeam |
| | sandy surface is defined b | by downward sediment transport, in both sandier and |
| | cobbles and boulders. As | the vehicles moved upslope, it became clear that the |
| | giant clam and various de | ad hard corals (Scleractinia), with occasional carbonate |
| | (talus) slope of mainly sar | nd (shell and coral fragments, including pecter shells, a |
| | consisting of layers of ree | f debris. The initial landing site was located on a scree |
| | types of materials: loose | sand cobbles and boulders, and large rocky formations |
| | consisted of mainly reef of | the bottom at this short distance from the atom |
| | Pacific Remote Islands Mo | bnument that reaches sea level (thus enabling this type |
| | Wake Island (atoll) is the | only geologic structure within the Wake unit of the |
| | shallowest depths while r | naintaining a safe distance from the fringing reef. |
| | and the northern side of t | the atoll accommodated this with some of the |
| | location was selected to o | optimize shallow water observation of fish and corals, |
| | The vehicles arrived at the | e seafloor at 22:26UTC, at a depth of 1020m. The dive |



| Overview map of the | e dive site. | Map of the dive site showing the actual track. |
|--|---|--|
| Representative Phot | tos of the Dive | |
| | | |
| Carbonate rubb seafloor with a member of the | ole and sediment halosaur, a common community at this site. | Peeking over the edge of a near vertical escarpment on the NE side of the dive site. |
| Samples Collecte | d | |
| Sample | | |
| Sample ID | D2_DIVE08_SPEC01BIO | |
| Date (UTC) | 20160810 | |
| Time (UTC) | 3:35:39 | |
| Depth (m) | 745.1436 | |
| Temperature (°C) | 5.28338 | |



| Field ID(s) | Narella sp. | |
|-------------|-------------|--|
| Comments | | |

Please direct inquiries to:

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