

# THE KWAJALEIN HOURGLASS



## THIS WEEK

### KWAJALEIN YOUTH

GO TO SEOUL - P 2

### BON VOYAGE

TO GREAT BRIDGE ENGINEER - P 3

### PROTECT YOUR EYES

FROM HARMFUL UV RAYS - P 8

Retiring Great Bridge Chief Engineer Mike Custer, right, is congratulated July 28 by Deputy Project Manager for Logistics Alan Stone, left, and his coworkers after completing 42 years of service on Kwajalein. He retires next month.

◉ Jordan Vinson

# KWAJ YOUTH ATTEND LEADERSHIP DEVELOPMENT PROGRAM IN KOREA

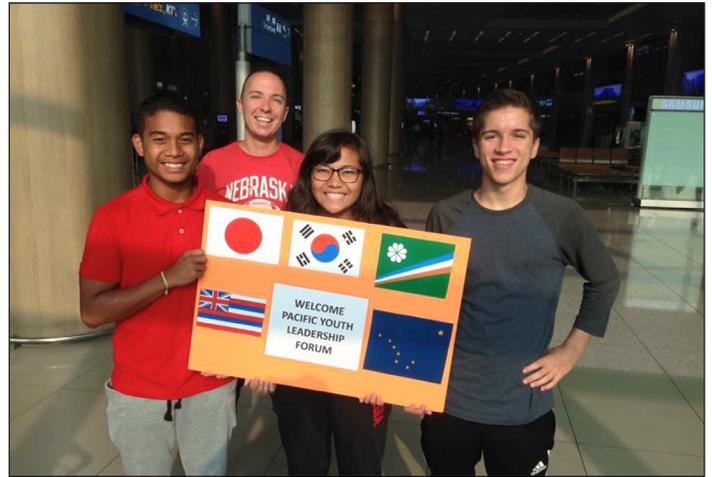
## HOURLASS REPORT

Three Kwajalein teens recently returned from an annual Army-sponsored youth leadership development forum in Seoul. Kwajalein Jr./Sr. High School juniors Aidan Alejandro, Abigail Bishop and Auguston Lelet joined adviser Jason Huwe for the 2016 Pacific Teen Panel Youth Leadership Forum in the Korean capital for a week of leadership development programs and travel opportunities in the East Asian peninsula.

Sponsored by the Army Installation Management Command-Pacific Region's Child, Youth and School Services, the week-long event brought Alejandro, Bishop and Lelet together with a couple of dozen youth from installations throughout the IMCOM Pacific region. There, the young leaders represented peers living on their home installations, briefing the IMCOM community on issues impacting them as teens on Army garrisons. Issues addressed by the teens ranged from youth substance abuse and lack of employment opportunities for young people, to the lack of fitness opportunities and the lack of college preparation resources on their installations.

Outside of working together on solutions for issues impacting teens on the Army's garrisons in the Pacific, forum participants gained instruction on leadership development skills from program leaders and participated in teambuilding projects. Outside of the classroom, the representatives gathered at a skate park for a beautification project, learned about current and future impacts of virtual reality on human society and took advantage of unique travel opportunities in Seoul, where they visited Seoul Tower, the Han River, Gyeongbokgung Palace and more.

**TOP:** Auguston Lelet, Abigail Bishop and Aidan Alejandro join adviser Jason Huwe, background, in Seoul. **BOTTOM:** The 2016 Youth Leadership Forum representatives gather for a group photo at Gyeongbokgung Palace.



Courtesy of Jason Huwe



# www.army.mil/kwajalein

Check out USAG-KA's new website for garrison and community news, links to each directorate and other helpful information. Have thoughts or suggestions? Send them to the USAG-KA Public Affairs Office at [Nikki.l.maxwell.civ@mail.mil](mailto:Nikki.l.maxwell.civ@mail.mil).

## THE KWAJALEIN HOURLASS

The Kwajalein Hourglass is named for the insignia of the U.S. Army 7th Infantry Division, which liberated the island from the forces of Imperial Japan on Feb. 4, 1944.

The Kwajalein Hourglass is an authorized publication for military personnel, federal employees, contractor workers and their families assigned to U.S. Army Garrison-Kwajalein Atoll. Contents of the Hourglass are not necessarily official views of, or endorsed by, the

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# GREAT BRIDGE CHIEF ENGINEER SETS SAIL AFTER 42 YEARS

## HOURLASS REPORT

**U.S. Army Vessel Great Bridge Chief Engineer** Mike Custer will from service at the U.S. Army Garrison-Kwajalein Atoll Marine Department next month, completing 42 years of steady employment on the garrison.

Jammed into an office hugging the lagoon July 28, a crowd of Marine Department coworkers gathered to wish him luck and relaxation during the next leg of his life. Some told stories of the laid back, pony-tailed marine engineer and gave him gifts. Some asked for advice for keeping one's sanity on such a small speck of land for so much time.

Custer's answer?

"Don't stay here 42 years," he joked.

Having first moved to Kwajalein in the mid-1970s, Custer saw the tail end of the Army's Safeguard anti-ballistic missile system and the flights of Spartan and Sprint missiles—a rowdier time on the island, during which the population on Kwajalein reached its peak of more than 4,700. He was here for the famous Homing Overlay Experiment—the dawn of the anti-ballistic kinetic kill that is the industry standard today. He was here for the entirety of the Reagan administration's Strategic Defense Initiative—or "Star Wars" program—and the inception of the Ground-based Midcourse Defense, THAAD and Aegis programs, all of which are currently deployed.

Shortly after he arrived, television broadcasts became available on Kwajalein. The Jackaroo Club on Roi would soon be demolished, replaced by the Outrigger Club, and the MMW Radar on Namur would soon be built. He was here for the construction of the "new housing" neighborhood on Kwaj in the late 1980s, the 1992 completion of the island causeway linking Ebeye—then with only half the population it supports today—with east reef islets to the north and the installation of the dome housing neighborhood in 2001.



U.S. Army photo by Jordan Vinson

**Retiring Great Bridge Chief Engineer Mike Custer is awarded a commemorative Chugach brass bowl by Deputy Project Manager for Logistics Alan Stone July 28 at the Marine Department.**

Through all the many changing configurations of Kwajalein over the years, Custer's home has been the Great Bridge.

"Whenever I asked anyone how long the Great Bridge chief engineer has been here, the common reply was, 'forever,'" wrote Chief Warrant Officer 3 David Casbarra about learning about Custer's service.

"He has served on Kwajalein for 42 years," Casbarra continued. "He has worked for several companies over that time, but has been a permanent fixture in the Marine Department. He sailed the U.S. Army Vessel McHenry to England from Kwajalein and has witnessed every change in the Marine Department over the years. ... The true 'owner' of the U.S. Army Vessel Great Bridge is Mike Custer, and her readiness is a testimony to his efforts over many decades."

## HERO OF THE WEEK



## HOURLASS REPORT

**USAG-KA's Hero of the Week** is Hiram Airam, who handles the important job of entry/exit badging for Alutiq at the Kwajalein Airport. Since 1986, Hiram has been responsible for the credentialing process for residents and visitors to Kwajalein, Roi-Namur and Ebeye. He enjoys interacting with people, and while sometimes there are challenges with an individual's paperwork, he works quickly to get their badging process completed and the individual on her way. Originally from Namdrik Atoll, Hiram moved to Enid, Oklahoma after high school where he completed two years of education at a private university. Hiram now lives on Ebeye with his wife Hemline. They have six grown children: one boy and five girls. Outside of work, Hiram is an avid fisherman and also enjoys serving as a deacon for United Church of Christ on Ebeye. He recently preached to a group of individuals on E nubuj (Carlson Island). He is looking forward to celebrating his 62nd birthday in January.



U.S. Army photo by Cari Dellinger

In the mid-1960s, E. H. Bryan, Jr.—then, manager of the Bishop Museum in Honolulu—and his staff at the museum's Pacific Scientific Information Center prepared an in-depth guide to the geography, biodiversity and history of the Marshall Islands and the cultural practices, lifestyles and histories of the Marshallese people. Written specially for Kwajalein Hourglass readers, the 24-part series appeared over the course of two years and was titled "The Marshalls and the Pacific."

Uncovered at the Grace Sherwood Library, it comprises a literal bounty of professionally-curated essays that take the reader on a profound tour of knowledge on everything from marine shell identification and the etymology of atoll names, to the traditional division of labor in the Marshallese household and explanations on how atolls are formed.

What follows in coming Hourglass issues are excerpts from the timeless "Marshalls and the Pacific" series. Enjoy.

## WHAT IS AN ATOLL?

BY E.H. BRYAN, JR.

THIS IS THE FOURTH IN A SERIES OF ARTICLES CONCERNING LIFE IN THE MARSHALL ISLANDS, AGAINST A BACKGROUND OF THE PACIFIC OCEAN AS A WHOLE. THEY ARE BEING PUBLISHED EXCLUSIVELY IN THE HOURGLASS AND WRITTEN BY E.H. BRYAN, JR., WITH THE ASSISTANCE OF THE STAFF OF THE PACIFIC SCIENTIFIC INFORMATION CENTER, BERNICE P. BISHOP MUSEUM, OF WHICH HE IS THE MANAGER.

[Editor's note: This June 18, 1965 entry includes antiquated names or titles of island groups.]

*The average dictionary will tell you* that "an atoll is a ring-like coral island inclosing a lagoon." While this is essentially correct, as far as it goes, it does not give one a very clear idea of what a Pacific atoll really looks like or how it was formed.

Persons interested in Micronesia should want to know more about atolls. There are about 90 atolls or single, isolated low coral islets in this quadrant of the Pacific.

There are: 16 in the Gilbert Islands, 33 in the Marshalls and 40 in the Carolines, with Wake and Marcus thrown in for good measure. There are more than 400 atolls in all of the earth's oceans. The greatest concentration in any one island group, 75, is in the Tuamotu Archipelago. Nearly all the atolls lie within the tropics, for the plants and animals whose limy skeletons form the reefs of which these structures are composed will not grow well in cooler areas.

Atolls are considered so important by scientists that they have been studied extensively. Just one of the several scientific groups interested in atolls, the Pacific Science Board of the National Research Council, has held several meetings to discuss them; has sponsored or coordinated various expeditions to them; and has helped to publish more than 100 scientific articles about them, in the Atoll Research Bulletin alone.

Atolls are described as being composed of coral reefs. Coral is a hard, limy substance made up of the skeletons of certain marine animals, classified as coelenterates. The individual animals, called polyps, extract calcium carbonate from the sea water and from it build tiny rooms in which the soft animal lives and eventually dies. Other polyps build around and upon this, and the mass of empty "rooms" makes up the reef structure like an abandoned apartment house.

One part of the reef is made of coral; fully as much, if not more, is composed of slimy organisms which are classified as plants—coralline algae and their relatives. Also cemented into the reef are fragments of all sorts of sea creatures – foraminifera, mol-

lusks, echinoderms, red and green algae, as well as pieces of rock from other sources.

All of this is constructed in comparatively shallow sea water. Reef-building plants and animals cannot function at depths of more than a few hundred feet, nor can they live for long out of salt water. Fringing reefs are formed along the shores of island. Fresh water and silt prevent their formation, so generally there will be a break in the reef opposite of the mouth of a stream. Reef-building organisms develop best on the seaward side of a reef, where waves and currents bring nutrient materials on which they feed and water rich in compounds. For this reason, reefs grow outward, away from islands. If sea level were to rise, which could be caused either by the sinking of the land or the addition of more water to the sea, the more active growth on the seaward side would cause a fringing reef to become a barrier reef, with deeper water between its inner edge and the shore (see diagram). Examples of islands with barrier reefs are Ponape and Truk.

If the change of level between sea and land continued, the island eventually could disappear completely, leaving a structure like an atoll. This was the explanation suggested by Charles Darwin in his "subsidence theory," published in 1842. His main point was that the island was going down with reference to sea level.

At an even earlier date (1821) another theory was suggested by the distinguished German naturalist Adelbert Von Chamisso. He had collected many specimens and observed many reef formations in the Pacific on the Russian exploring ship Rurik (1816-17). He said an atoll could be formed by the natural growth of corals around the outer edge of a submerged bank.

Another field naturalist, Carl Semper, working in Palau, suggested in 1863 that reefs were formed by outgrowth on a rising foundation, and that the lagoon of an atoll was produced by the solution of the enclosed living reef.

Various distinguished geologists and naturalists have backed or expanded one or another of these ideas. In 1910, R.A. Daly explained the changes in sea level by a "glacial control" theory. This suggested that peaks were eroded into platforms, on which atolls could form, during the various glacial periods, when the level of the sea had been lowered by the removal of water to form glaciers. Then, as sea level rose again, following the melting of the glaciers, and the water temperature became warmer, reefs grew up around the edge of the platform. Upgrowth, he said, kept pace with the rise in sea level, forming the present barrier reefs and atolls. Other scientists explained differences in relative elevation by movements in the Earth's crust. It is likely that all of these activities may have played a part in the formation of barrier reefs and atolls.

The name "atoll" is derived from the word Adal in the Malayam language, spoken along the southwestern coast of India. It is used to describe the form of the islands in the Maldive group to the southwest of that coast. If we were to follow the method of the biologist, this would be called the "type locality" and these 22 lagoon-enclosed islands would be "typical" atolls.

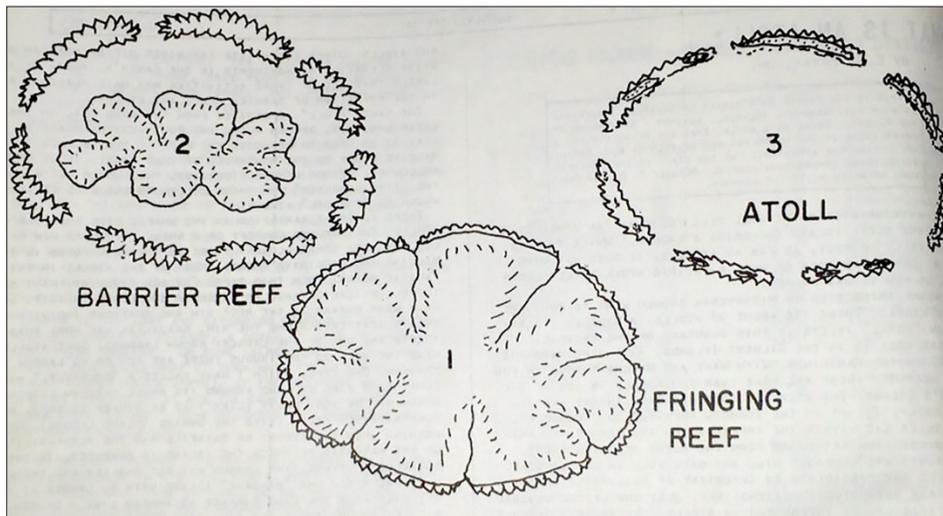
There is great variation in the shape, size and form of atolls. The popular concept of a small, circular rim of land or reef comes closest to being the form found in the Maldive and Laccidive groups. Most of the atolls in the Pacific depart from this type. Few are circular, many being elliptical or angular in shape and large in size. Some have many breaks in the reef rim and numerous individual islets scattered along the rim. Kwajalein

SEE "ATOLL," PAGE 5

has more than 90 islets and one of the largest known lagoons. Some atolls have the reef so continuous there are few or no lagoon entrances. One type, which I have called a "doughnut," has a continuous ring of land around its small shallow lagoon, which may be very salty (like that of Sydney Island), or comparatively fresh (like the Swains Island Lagoon), depending upon the amount of rainfall and permeability of the material of which the island is composed. In the sequence of types, the lagoon may get smaller and smaller until we reach the "pancake" island with no lagoon at all; but even here the land surface is shaped like a saucer, highest around the outer rim, facing the sea in a steep beach. Baker and Jarvis Islands are examples. Their highest elevation is about 20 feet; rarely does the land rim reach higher, unless heaped up artificially. These are the simplest sand piles, thrown up by the force of waves, generally highest on the windward ocean beach. The lee side of atolls usually have the least land.

The question, when does an atoll cease to be one, is purely academic. A definition was accepted by a symposium held in Honolulu in 1951, which fixed the limits of what might be called an atoll roughly as follows. It is a limestone and sand structure which rises abruptly to sea level on the ocean side and is not elevated to a height of more than about 20 feet above that, to distinguish it from a "raised atoll." It also excludes "sunken atolls," which are entirely below the surface of the sea; but often it is easy to see from soundings on a chart that they are related structures. An atoll contains no high islands in its lagoon, for then the reef rim becomes a barrier reef for the central islands, as in the case of Truk, which, should not be called an atoll, but a group with a barrier reef. Also excluded are reefs and their islets situated on platforms or shelves of adjacent land masses, such as the Great Barrier Reef in relation to Australia.

A great deal has been learned about atolls during the past 20 years as a result of careful studies, such as those made of Bikini and Eniwetok, in connection with atomic bomb tests, and also of Arno (Marshall Islands), Onetoa (Gilbert Islands), Raroia (in the Tuamotus), and Ifaluk (in the Carolines) by atoll research teams, sponsored through the Pacific Science Board with grants from the National Science Foundation and other scientific institutions. Results of these expeditions have been published in the Atoll Research Bulletin. They have brought out many details concerning reef structure, geology,



soils, hydrology, plants, animals (both on land and in the sea), and about an atoll as a home for man. What is said about atoll reefs will be summarized in another chapter of this series.

Because of its origin from the sea, which surrounds the atolls, one might be led to believe that there would be little variation in its soil and other basic conditions. This is not always true. The chemical composition of the soil depends upon the mineral from which it was formed. Calcium and magnesium carbonates predominate, but other elements and compounds occur in different proportions, together with traces of many elements. The amount and seasonal occurrence of rainfall has a profound effect on the ability of the soil to grow a plant cover. This also is related to the salinity of the ground water. The amount of humus in the soil also is important. Temperature plays little role, as most atolls lie within the tropics. It might almost be possible to estimate the rainfall by the type of vegetation found on an island were it not for great fluctuation in rainfall from one year to another. This is especially noticeable in islets with marginal rainfall. The vegetation, for example, on the three southern atolls of the Phoenix group would make them capable of supporting populations in wet or normal years, but unable to do so during dry years. The same is true of some atolls in the Marshall and Gilbert groups.

Natural catastrophes, such as tropical cyclones and tsunamis, may have a profound effect on atolls and their vegetation, to say nothing of the human population. Fortunately, most of the Marshall atolls have not been plagued often by such disasters. On some, changes caused by man have affected the vegetation far more. Dr. F.R. Fosbert has noted that such conditions have been going on over long periods of time: the pre-European period, the Copra Commerce period, and the Sec-

ond World War. Many weeds have been imported in addition to the clearing or alteration of indigenous vegetation.

In the next chapter, a resume will be given of the principal kinds of plants found on Micronesia atolls. Here will be noted some of the associations in which these plants occur with different types and parts of an atoll.

Perhaps the most difficult place for plants to grow on atoll islets is on the windward ocean shore. Here one finds a "beach barrier" made up of shrubs and small trees, capable of stopping the salt spray carried inland by the wind, and protecting the more open stand of plants to leeward. In the seaward face of this barrier stand a line of *Scaveola* bushes. Their thick, waxy-surfaced leaves seem little affected by the salt spray. Behind the line of *Scaveola*, the barrier consists of *Tree Heliotropes*, *Morinda*, *Guettarda*, *Pandanus* and other small trees, laced together with *Morning-Glory* vines and the climbing *Wedelia* shrub with yellow daisy-like flowers. The "mixed forest" which this protects includes (beside species in the beach barrier) *Intsia*, *Cordia*, *Pisonia*, *Terminalia*, *Allophylus*, *Ochrosia*, *Pipturus* and many other trees and shrubs.

Some of these may occur in small, nearly pure stands. *Pisonia* trees may form such a thick crown, supported by their light colored, smooth trunks and soft wood that no other plant will grow beneath. This may occur especially on islets where the reef rock may have been raised slightly above the usual level, such as Kwadack and Eniwetak, on the east rim of Kwajalein Atoll. Beneath the thick canopy, the ground is covered with broken twigs, leaves and humus, mixed with the droppings of many sea birds which nest in the trees.

The first intimation that one is in a

SEE "ATOLL," PAGE 8

# COMMUNITY CLASSIFIEDS

## HELP WANTED

Visit USAJOBS.GOV to search and apply for USAG-KA vacancies and other federal positions.

KRS and Chugach listings for on-Island jobs are posted at: Kwajalein, Roi-Namur and Ebeye Dock Security Checkpoint locations; outside the United Travel Office; in the Roi Terminal/Post Office; at Human Resources in Bldg 700 and on the "Kwajweb" site under Contractor Information>KRS>Human Resources>Job Opportunities. Listings for off-island contract positions are available at www.krsjv.com.

Community Services Administrative Assistant II HR Req.# K051755 Provides administrative and program support for KRS Community Services and the community at large. Adheres to company Policies, Procedures, Values, Covenants, and Business Ethics. Must have excellent communication skills, computer skills, and the ability to multitask. For more information contact the KRS Human Resources Office, Bldg #700 at 54916.

## COMMUNITY NOTICES

From July 26 to the end of October 2016, interior repair work will be occur inside the Food Court. There will be times identified later when the Anthony's Pizzeria area will be closed and one brief period where the entire Food Court will have to be closed. We apologize for the inconvenience.

July Birthday Bash Pajama Party. 8 p.m., Saturday, July 30, at the Ocean View Club. Party in your PJs! If you're celebrating a July birthday, sign up at the Community Activities Office Bldg 805 for a complimentary drink card. Please present K-badge when registering. Shirt and shoes required. Must be 21 years or older. Questions? Call 53331.

Summer Fun 3v3 Basketball Tournament Registration. August 2-12. Tournament play August 16-20. Cost is \$50 per team. 3 players on the court at a time, max 6 players per team. Half court games. To register, contact Derek at 51275.

Merbabes Swim Class. 9-9:30 a.m., Saturday, August 6, at the Family Pool. Come enjoy an American Red Cross Parent/Child Swim Lesson. Class is for children ages 6 months - 3 years. All participants must be accompanied by an adult in the water. The purpose of this class is to develop a comfort level in and around the water. Swim diapers are required for children who are not potty-trained. Cost is FREE! For questions, contact Cliff at 52848.

Kwajalein Schools is soliciting bids for an on-island photographer to take pictures for the upcoming 2016-2017 school year. If interested, please pick up the specification of requirements at the high school office. Bids are due by August 13. Questions? Call the High

School office at 52011.

Travel Books Wanted. Finished with your summer trip? Done with the travel books? Donate them to Grace Sherwood Library! Questions? Call 53439.

Island residents, per TB-MED 530 Food Safety regulations, filling of personal mugs or paper cups brought into the dining facility is prohibited. Please use the cups provided for your beverage. Thank you for your cooperation. Zamperini Dining Facility staff.

ROAD CLOSURE. The elevated dirt road between the Space Fence Power Plant Annex construction site and the Kwajalein Power Plant is closed to all traffic, including bikes, until further notice. Please use CAUTION if in the area.

Safely Speaking: Chemical Labeling. Read and understand the chemical label and SDS before using a chemical to know the hazards and, precautions, and PPE selection.

E-talk: Leaks from Vehicles. It is the driver's responsibility to ensure that the vehicle is not leaking any fluids. If any liquid other than condensed water vapor from the air conditioning unit is observed, the driver shall immediately stop the vehicle, place absorbent under the leak, and call 911 to report the leak. Call KRS Environmental at 51134.

## PASSPORT RENEWALS

The U.S. Embassy-Majuro consular will visit USAG-KA and Ebeye Aug. 6-10 to assist with passport requests and other U.S. citizen services, such as adoption FAQs.

1:30-5 p.m., Aug. 6, at USAG-KA

9 a.m.-4 p.m., Aug. 8, at Ebeye

8 a.m.-5 p.m., Aug. 9, at USAG-KA

8 a.m.-noon, Aug. 10, at USAG-KA

More information regarding location and exact times to follow.

## THE NUMBER OF CASES OF INAPPROPRIATE VEHICLE USE HAS STEADILY INCREASED ACROSS THE GARRISON, and

USAG-KA wants all personnel to be aware of the proper and legitimate use of vehicles to prevent waste of resources and abuse of privileges. Other than the QOL rental vehicles, all vehicles on USAG-KA are restricted to official use only. Use of work vehicles to travel between your home and place of employment, to transport non-personnel, to run personal errands, to pick up personal mail at the post office, to travel to retail establishments, dining facilities, the gym, the bank, or the food court is prohibited. Transportation of personnel or dependents to or from the airport is also prohibited, unless the traveler is on official business or is PCS'ing. Transporting alcohol in a work vehicle is also prohibited. Personnel who misuse vehicles may be subject to adverse personnel action by their employer or adverse administrative action by the Command.

## Captain Louis S. Zamperini Dining Facility

\*MENU CURRENT AS OF JULY 27

### LUNCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	August 6
Boneless Chicken	Short Ribs	Fried Chicken	Baked Meatloaf	Creole Macaroni	Sloppy Joes	Chicken Parmesan
Nacho Beef	Blackened Chicken	Chili Cheese Dogs	Garlic Roast Chicken	Jerk Chicken	Citrus Roast Chicken	Three Cheese Tortellini
Nacho Chips & Cheese	Lyonnais Potatoes	Baked Beans	Mashed Potatoes	Red Beans and Rice	Roasted Potatoes	Vegetable Medley

### DINNER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	August 6
Caprese Chicken	Sliced Roast Beef	Pork Adobo	Steak Night	Lasagna	Chicken Pasta	Beef Ragout
Fettucine	Fish Du Jour	Chicken Stir Fry	BBQ Chicken	Garlic Bread	Fish Du Jour	Chicken Nuggets
Beef Stew	Mashed Potatoes	Parslied Potatoes	Scalloped Potatoes	Vegetables	Mashed Potatoes	Egg Noodles

# SUN-MOON-TIDES

	SUNRISE SUNSET	MOONRISE MOONSET	HIGH TIDE	LOW TIDE
<b>SUNDAY</b>	6:40 a.m. 7:10 p.m.	3:50 a.m. 4:42 p.m.	2:16 a.m. 4.0' 2:48 p.m. 3.1'	8:50 a.m. 0.1' 8:40 p.m. 0.1'
<b>MONDAY</b>	6:40 a.m. 7:10 p.m.	4:47 a.m. 5:38 p.m.	3:05 a.m. 4.3' 3:34 p.m. 3.4'	9:34 a.m. -0.3' 9:26 p.m. -0.2'
<b>TUESDAY</b>	6:41 a.m. 7:10 p.m.	5:44 a.m. 6:32 p.m.	3:47 a.m. 4.6' 4:13 p.m. 3.7'	10:13 a.m. -0.6' 10:06 p.m. -0.4'
<b>WEDNESDAY</b>	6:41 a.m. 7:10 p.m.	6:39 a.m. 7:22 p.m.	4:24 a.m. 4.7' 4:48 p.m. 3.8'	10:47 a.m. -0.7' 10:42 p.m. -0.5'
<b>THURSDAY</b>	6:41 a.m. 7:09 p.m.	7:32 a.m. 8:10 p.m.	4:59 a.m. 4.7' 5:20 p.m. 3.9'	11:19 a.m. -0.7' 11:16 p.m. -0.5'
<b>FRIDAY</b>	6:41 a.m. 7:09 p.m.	8:22 a.m. 8:54 p.m.	5:31 a.m. 4.6' 5:52 p.m. 3.9'	11:50 a.m. -0.6' 11:48 p.m. -0.4'
<b>AUGUST 6</b>	6:41 a.m. 7:09 p.m.	9:11 a.m. 9:37 p.m.	6:01 a.m. 4.4' 6:22 p.m. 3.8'	12:19 p.m. -0.5'



Sexual Harassment/Assault Response and Prevention (SHARP) Contact Information

Capt. David Rice  
SHARP Victim Advocate

Work: 805 355 2139 • Home: 805 355 3565  
USAG-KA SHARP Pager: 805 355 3243/3242/3241/0100  
USAG-KA SHARP VA Local Help Line: 805 355 2758  
DOD SAFE Helpline: 877 995 5247



## WATER COOLER SAFETY

**Water coolers must be cleaned** for the safety and welfare of all those who depend on them. Without regular cleaning, water coolers can spread germs and bacteria that can make you sick. According to SPI 2923, all coolers must be cleaned regularly and stored properly. For proper cleaning instructions please follow the instructions listed in SPI-2923.

Below is a list of items that will be needed to complete the cleaning of the containers, plus the stock code numbers. This information can also be found on the Environmental, Hazard and Safety Department's USAG-KA-web Intranet webpage.

- Baking soda 13.5 re-sealable bags
- Clorox bleach
- Dishwashing soap
- Narrow tube brushes – straight tip 1/2" diameter, 3" long
- Hand utility brushes – heavy duty, trim length 7/16" x 1/4", brush length 1 1/2 x 1"
- All-purpose scrub brush – 5" fingertip handle
- Scrub pads 6" x 9", green, medium duty
- Nitrile gloves – powder free
- Disposable aprons
- Disposable paper towels
- Bucket for mixing – 5 gallon
- Bucket with lid and handle for holding cleaning supplies – 5 gallon, red
- Measuring cup



Check out daily news and community updates on the official U.S. Army Garrison-Kwajalein Atoll Facebook page.

[www.facebook.com/usarmykwajaleinatoll](http://www.facebook.com/usarmykwajaleinatoll)

For command information questions, please contact Public Affairs at 54848.

<i>Café Roi</i>							*MENU CURRENT AS OF JULY 27
<b>LUNCH</b>							
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>August 6</b>	
Sliced Roast Beef	Breaded Pork Chop	Assorted Pizza	Meatball Sub	Fish Sandwich	Beef Tacos	Philly Cheese Steak Wrap	
Eggs Benedict	Chicken Supreme	Baked Ziti	Bombay Chicken	Cottage Pie	Chicken Enchilada Casserole	Roasted Pork Loin	
Sauteed Fish	Breakfast Frittata	Cheesy Garlic Bread	Stir-Fry Vegetables	Vegetable Quiche	Pinto Beans	Braised Red Cabbage	
<b>DINNER</b>							
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>August 6</b>	
Roast Pork	Roasted Chicken	Thai Beef with Vegetables	Grilled Steak	Fried Chicken	Greek Herb Chicken	Sausage and Peppers	
Chicken Florentine	Short Ribs	Chicken in Peanut Sauce	Chicken Fajitas	Swedish Meatballs	Pastitsio	Chicken Alfredo	
Pasta with Veggies	Stuffing	Tofu Stir-Fry	Baked Potatoes	Noodles	Lentils	Pasta Provencal	

# PROTECT YOUR EYES FROM HARMFUL UV RAYS

## HOURLASS REPORT

*Living so close to the equator introduces some risks.* The sun's effect on eyes can be severe without proper protection.

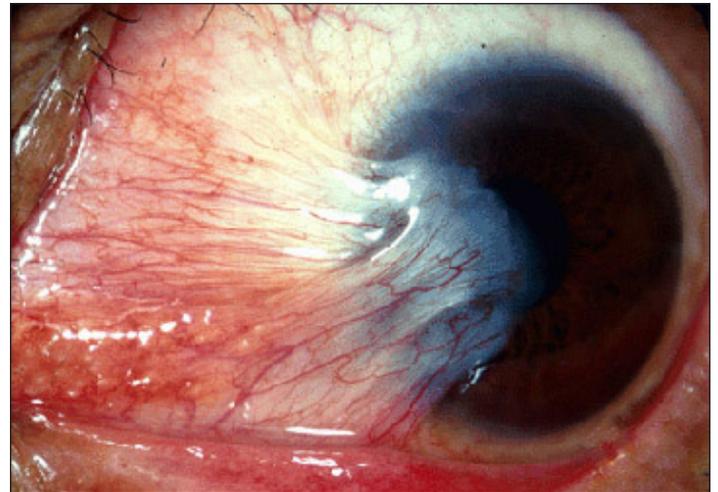
According to the University of Maryland Medical Center, exposure to ultraviolet radiation from the sun can lead to a sunburn of the cornea, the clear surface of the eye. UV rays are most intense at noon and immediately before and after, from 10 a.m. to 3 p.m. UV rays also increase in intensity in relation to altitude and latitude. The higher the altitude, the greater the concentration of UV rays. Likewise, the rays are more powerful the nearer the latitude of the equator. UV rays bounce off reflective surfaces, including water and sand. Thus, a skier, swimmer, fisherman or beachcomber may be bombarded with UV rays from above and below.

High exposure to UV rays can cause a corneal burn within one hour, although symptoms may not become apparent until six-12 hours have passed. Symptoms include excessive tearing, pain, redness, swollen eyelids, pain when looking at light, headache, a gritty sensation of the eyes and decreased, hazy vision. Similar symptoms occur when the surface of the eye is physically scratched.

The surface of the cornea will regenerate spontaneously in 24-48 hours, and eyes can be treated with eye drops.

According to local doctors, pterygium—raised wedge-shaped growths of the cornea—are common in the Marshalls, as well as other places close to the equator.

Solar radiation includes visible light and ultraviolet energy, which is not visible but is harmful to the exposed parts of the body. The outer surface of the eye is covered with a layer of cells. The cells on the eye are more sensitive to ultraviolet damage than skin, because they do not have a protective coating. If the cells and the base membrane on which they rest are damaged by ultraviolet radiation, a healing response is trig-



*A case of pterygium, aka surfer's eye.*

Jonathan Trobe, M.D., University of Michigan Kellogg Eye Center

gered that involves the release of enzymes, which dissolve the damaged tissue, and growth factors that stimulate the growth of new tissue. Given the same exposure, different people will develop different responses due to individual variations in enzyme levels in their tears among other factors.

Any new growth in the eyelid or any non-healing ulcer around the eyes deserves proper attention.

Sun-damaged eyes can be treated a number of ways: When spending time in the sun always wear sunglasses or prescription glasses fitted with UV protection; don't spend too much time in the sun; carry a bottle of eye drops and use if and when you feel a stinging sensation in the eyes after prolonged sun exposure.

"ATOLL," FROM PAGE 5

thicket of *Uchrosia* trees is finding on the ground quantities of fibrous, egg-shaped masses, some of which are sending up sprouts. Looking up, one sees a dense canopy of leaves supported by slender trunks with branches in layers, like spokes from a wheel.

Pandanus trees, with their prop roots and tufts of long, ribbon-like spine edged leaves, which are usually scattered through the forest, may grow in clumps.

On very dry atolls, the tree *heliotropes* (*Messerschmidia*) may form clumps. The same is true of *Cordia* thickets.

On wetter islands, breadfruit trees will generally be found planted around villages; but in the drier, northern atolls, where they do not grow so well, they are more likely to be found in small clumps near the center of larger islets where there is more moisture and less saline ground water, surrounded by the usual mixed forest.

Well-kept groves of coconut palms may be planted in rows,

spaced so that their spreading crowns are not crowded, and with low cut ground cover beneath. More frequently they grow hit or miss, as the nuts fall and sprout, surrounded by a dense tangle of shrubs, herbs and vines.

A wiry shrub or small tree, *Pemphis*, with stiff branches and dense clusters of small, slender fleshy leaves, may form small stands or even grow into trees of moderate height on lagoon shores, such as those of *Ennylabegan* islet.

Open areas may be covered with weeds, grasses (especially *Lepturus* bunch grass) and the harsh *Fimbristylis* sedge.

Pits have been dug in some moist areas in the interior of islets, in which Taro plants are cultivated. Marsh plants, such as sedges, may grow in such areas.

A variety of ornamental shrubs and useful plants have been planted in villages. The streets and yards of residences on *Kwajalein* islet have been beautified with many introduced ornamentals.



Kwajalein Range Services wants your feedback on how the garrison's Community Services programs are going. Take part in ongoing surveys to voice your opinion on everything from the Kwajalein Hourglass and Mongolian Night at Café Roi, to the golf courses and the Self Help shops. Click on the "We Want Your Feedback" icon on the USAG-KA-Web Intranet home page and type away.