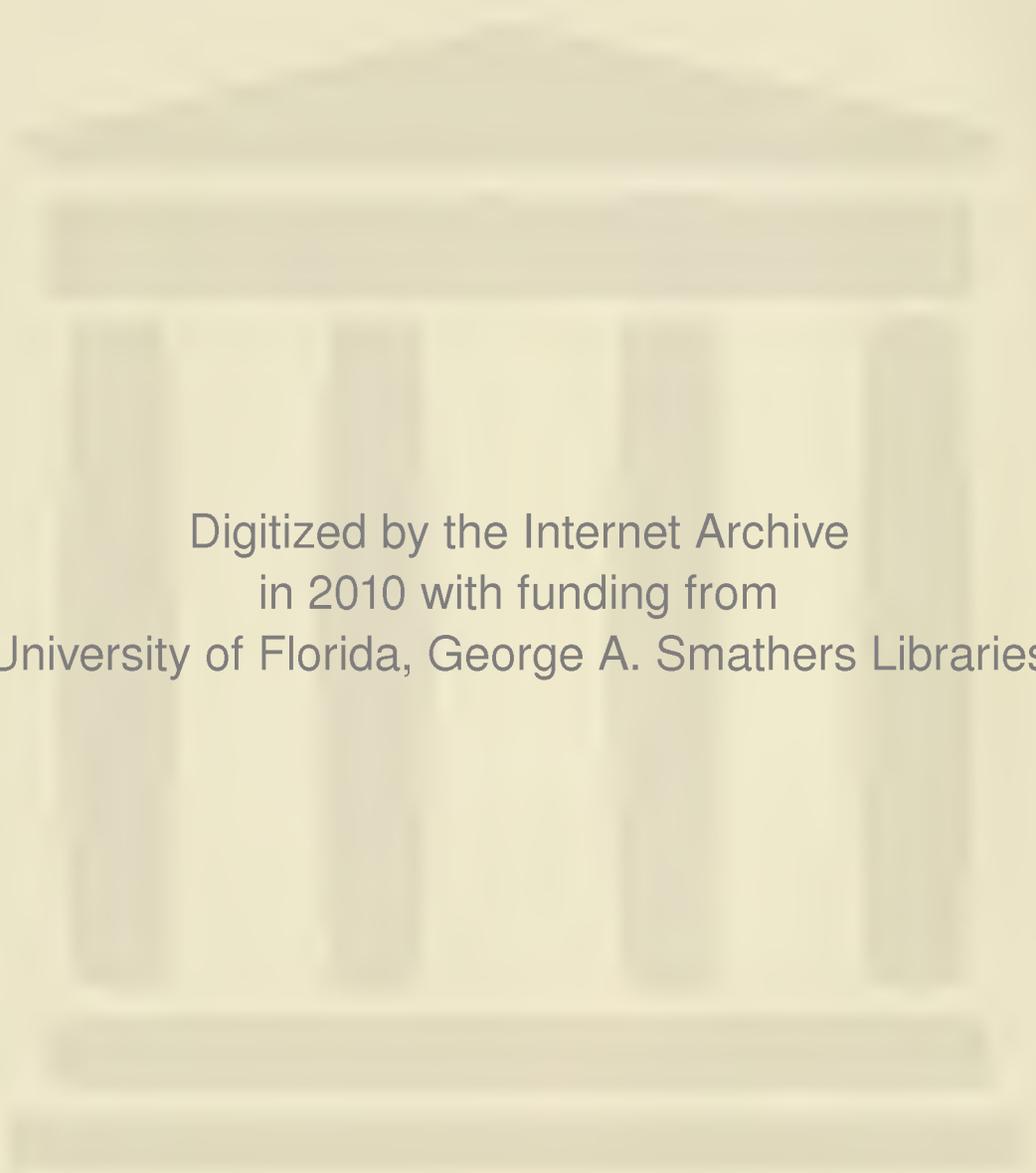


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PANAMA CANAL
REVIEW



63
37

Y 1969

W. P. LEBER, Governor-President

R. S. HARTLINE, Lieutenant-Governor

FRANK A. BALDWIN
Panama Canal Information Officer



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MORGAN E. GOODWIN, Press Officer

Publications Editors

LOUIS R. GRANGER, TOMAS A. CUPAS

News Writers

EUNICE RICHARD, FANNIE P. HERNANDEZ,

JOSE T. TUÑON, and LUIS C. NOLI

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BIRDS ABOUND in the jungles as well as cities and towns of Panama. This obvious observation caused us to dedicate both the front and back covers to four of these lovely winged creatures. The birds, all macaws which are members of the parrot family, are, from left on both pages: Lefty, Pappy, Allegra, and Cindy. Except for Pappy, they are owned by Miss Mary L. Clark, a supervisory nurse at Gorgas Hospital. Pappy, a blue and gold macaw which came from Colombia, is owned by Air Force S. Sgt. and Mrs. Fred R. Doss. Lefty, a green-winged mountain macaw whose eyes give the appearance of his being a tavern regular (the red lines are actually small feathers), was purchased at the public market on Avenida Eloy Alfaro in Panama City. Allegra, a scarlet macaw, will roll over on her back to have her belly scratched. She was near death when Miss Clark bought her from a Canal Zone parrot fancier last year. Cindy is the rarest of the feathered foursome and was acquired by Miss Clark through a friend in Brazil. A hyacinth macaw, Cindy is native to the jungles south of the Amazon River. Miss Clark, who has been collecting large birds for about 15 years, says they are relatively easy to keep. She feeds them such things as sunflower seed, peanuts, raw vegetables and fruit, hard-boiled eggs, chicken drumstick bones and cheese for protein. Parrots live approximately 40 years, although there are claims that they live much longer. Macaws are confined to Central and South America but once were found in the West Indies. They are among the largest parrots and are distinguished by a "naked" space around their eyes.

Cover photos by Arthur L. Pollack. Sketches on inside pages by Myrna Soriano.



PANAMA

A Bird Watcher's Paradise

By Fannie P. Hernandez

IN THE earliest dawn, before the sun has emerged through the paling sky, a sleek, black, yellow-eyed, male grackle nestled in a mango tree breaks the silence with a serenade to the new morning. His tune is of long drawn out notes, cheerful, throaty, subdued, yet loud enough to awaken anyone in the vicinity. The female, brown and smaller, quietly chatters back from a nearby palm frond.

The handsome fellow singing with all his heart is also known as a clarinero—one of the abundant bird fauna inhabiting the Isthmus of Panama. An ornithologist's paradise, there are more different birds found here than in all of North America north of Mexico—approximately 850 species.

Best Months

Though the abundance of birds is evident throughout the year, April and early May are especially favorable for bird watching. It is the beginning of rainy season, a time when not only the native species but also the North American birds in migration may be observed. South American species flying to Central America also can be seen.

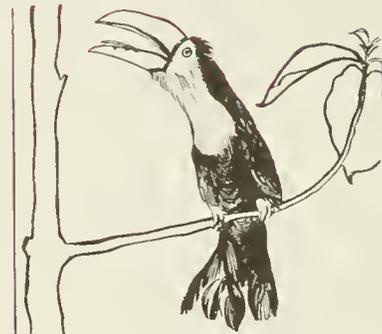
It is estimated that 6 billion birds, adults and young, moving at night from Canada and the United States, migrate to southern United States, Mexico, Central America and South America each winter. A large number of these are seen in Panama.

Besides the striking grackle which may be seen most anywhere except the dense forest, are the birds of the tanager family noted for their brilliancy

of plumage. They are blue, yellow, green, and red. The crimson and black species locally called "sangre de toro" is usually seen at the edge of the jungle or along the roads in the Interior.

At this time of the year, the lovely musical notes of the Panama thrush tanager may be heard ringing out from the jungle. One of Panama's most beautiful birds, this tanager is dark slate with a rose-red stripe on the sides of the forehead broadening in front of the eyes. The male has a loud sweet whistle of notes in different pitches.

Related to the tanagers are the honeycreepers, the family of small song birds which abound in the humid, heavily wooded areas of the Isthmus. Bright



also observe on the Panama countryside barred ant shrikes, sparrows, Panama robins, which resemble their northern relatives, hummingbirds, woodpeckers, saltators, wrens, the "pico-gordo," the thick-billed euphonia, which has a sweet canary-like sound, and flycatchers, which probably outnumber them all.

Busy little seedeaters are very numerous at the end of the dry season and the mangrove warbler is always to be found in the swamps. Of special interest to the bird watcher is the oropendula which suspends his long hanging nest from the branches of large trees. The male sings a long-drawn, far-carrying liquid gurgle as he bows forward into an inverted position, raising his wings above his back.

Doves are abundant and very tame in the fields, gardens, and along the roads. A flock of ducks is not a rare sight.

Along The Shore

Shore birds, practically all migrants, are abundant. Sea birds also are numerous and breed in immense numbers on the islands in Panama Bay. Laughing gulls, royal terns, brown pelicans and frigate birds are usually seen along the shore.

Another large family of birds is that of the kingfisher ranging in size from a small songbird to a crow. They are found near the water and feed on small fish which they catch by plunging into the water. They nest in holes in trees and banks.

The motnots, related to the king-

(See p. 4)



shades of blue and green predominate in the males and yellow is prominent in some species. One of the most brilliant is the red-legged blue honeycreeper. The male is deep sapphire blue with a turquoise crown. Part of the underwing is yellow and flashes out brightly when the bird is in flight. The female is olive green with underparts of paler and brighter green. The honeycreeper rarely sings in full daylight, but in the breeding season, the male sings a weak, unmelodious song at dawn.

Grassquits

Common and comical to watch in the open fields are the small blue-black grassquits that leap vertically several feet and alight again in the same spot, uttering a few short notes during the jump.

On a spotting tour, a birder may





Birding On The Isthmus

(Continued from p. 2)

fishers, are beautiful birds of green, blue and russet with graduated tails bare about an inch above the extremities, forming racket-shaped tips. The bird itself preens off the barbs. Motmots are found in the deep forests or dense thickets, often sitting in one place for a long time.

A fairly common bird in woods and undergrowth is the squirrel cuckoo, somewhat like the widely distributed long-tailed members of the family.

A slow, melancholy call, like a whistle of variations is heard in the savannas. It is the northern striped cuckoo, called "tres pesos" by the Panamanians. These birds call to each other by the hour bringing music to the open fields. Where there are cattle, the tick bird or "garrapatero" is surely to be found as he feeds on insects on cattle.

Toucan

A frog-like croak which may be heard more than half a mile across the open comes from one of the most striking and distinctive of all tropical birds—the toucan, a large jungle bird. It has an enormous, slightly curved yellowish green bill, nearly as long as its body and very thick. The brightly colored toucan roosts in holes in trees and feeds on fruit.

A favorite of bird watchers and non-birders too, is the family of parrots represented by several species on the Isthmus including parakeets and macaws.

Their plumage is highly colored and variegated, with green being the predominant color. Parrots are noisy birds with harsh voices and usually nest in hollow trees, the large species inhabiting the deep forest. They remain quiet during the day but can be heard squawking early in the morning and before dark.

Showiest Parrot

The macaw, the large, magnificent, blue and yellow or scarlet bird, is the showiest member of the parrot family. It has a powerful hooked beak which it uses to crack palm nuts and is extremely noisy. Fairly common, macaws are usually seen in pairs and frequent the tops of trees.

One of the most common and widely distributed birds of the Isthmus is the parakeet. Watchers may observe the orange-chinned parakeet at sunset going from tree to tree keeping up a shrill chattering as it feeds. The Veragua parakeet is apple green passing to bluish green on top of his head with greenish blue wings, yellowish below. The bill is horn color. The smaller "perico" is bright yellowish green with a patch of bright orange on his chin and upper throat. These beautiful little creatures are often caught and sold as cage pets.

Panama, host to many species common to both North and South America besides its own particular birds, offers a veritable field day to bird watchers.



Isthmian Citrus Capital Blooms On Volcano Slopes

By José T. Tuñón

A COMBINATION of Panamanian technical skill, and United States business foresight and dollars has turned a once isolated village, tucked away in the highlands of western Panama, into the citrus capital of the Isthmus in less than a decade.

Rovira, just 15 miles from David, the thriving capital of Chiriquí Province, is no longer a remote spot on the map. It is the center of a 10,000-acre grove planted with 665,000 trees about to yield their first golden harvest. These are not ordinary orange trees. The Panama-United States combination that has marked the Citricos de Chiriquí venture in Rovira has been carried right into them—literally. The native Panamanian orange trees were used as the scions for the grafting of stocks from the best of the United States' orange country—Florida.

The skill has been provided by a team of Panamanian agricultural spe-



PICKER—About 300 are employed during harvesting season.

cialists. The business foresight and dollars have come from National Bulk Carriers, Inc., a corporation owned by United States interests which conceived the orange juice industry in the Chiriquí area. The investment is now approaching several million dollars.

By Oxcart

Ten years ago, Rovira could be reached only by an oxcart trail winding in and out of cane fields, rock-strewn fields, and sections of thick jungle. Today, visitors drive comfortably to the town over a modern asphalt highway. Rovira itself is dwarfed by the installations of Citricos de Chiriquí for producing orange concentrate of highest quality for export. And there is no other spot in the Republic whose location is marked by 665,000 orange trees.

June 26, 1968, was a memorable day for Citricos de Chiriquí. Several refrigerated containers filled with 50-gal-

(See p. 6)



NEW INDUSTRY—Orange trees are spread as far as the eye can see on the slopes of the Baru Volcano in the Rovira area of Chiriquí Province, where Citricos de Chiriquí, S.A., is established.

GOLDEN HARVEST OF CHIRIQUI

(Continued from p. 5)

ion barrels of what to Rovira was liquid gold, were loaded aboard a ship berthed in Cristobal—destination, Canada. The barrels contained the first orange concentrate produced in Rovira and the loading operation crowned 10 years of patient effort.

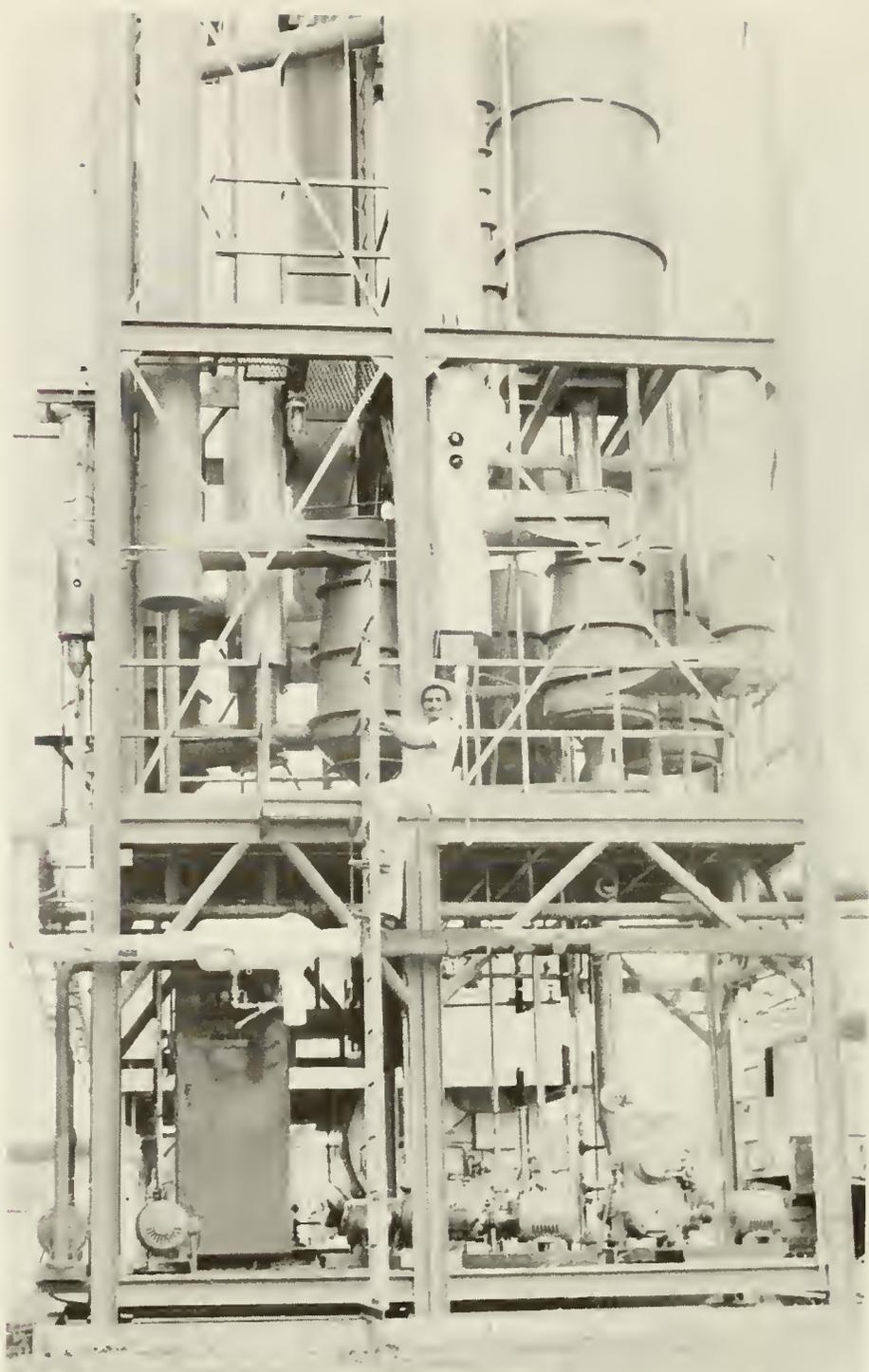
The Cítricos de Chiriquí complex is on the slopes of the Baru Volcano at an altitude of 3,000 feet. Dominating the scenery is a huge processing plant, installed at a cost of more than \$1 million. Clustered around it are administrative offices, large maintenance shops, and a plant for producing "Citropulpa," (a byproduct in growing demand as cattle feed), a company restaurant and even a lime quarry. The complex itself is the hub of the orchard, spread as far as the eye can see and beyond, some sections as high as 4,000 feet above sea level.

The Supervisors

Until March of this year, the man who supervised the operations at Rovira as Chiriquí manager for Cítricos was Juan B. Ferrer, a Panamanian agronomist. He has just been promoted to staff agricultural consultant with residence in Panama City for the various farming projects operated by National Bulk Carriers, Inc. Ferrer's successor is Sebastián Gilberto Ríos, Jr., formerly chief engineer in charge of processing and construction.

Ferrer, still in his thirties, holds a master's degree in phytopathology (plant diseases) from the University of Florida. With Cítricos since the company came into being in 1960, he was responsible for all the field work that was required prior to actual planting. His work ranged from soil analysis and preparation to the selection of the type of orange best suited for cultivation in the region and a study of prevailing insects.

"The native tree was chosen as the budwood source," Ferrer says, "because tests showed it has a good yield and is resistant to insects. We decided to graft it to rootstocks of Florida's known varieties. The results have been amazing. The first real erop from the initial planting in 1961 is due next September. The trees are bearing and we estimate that



HEART OF PLANT—The evaporators shown here produce the orange concentrate. About 12,750 pounds of juice are reduced to 2,750 pounds of concentrate every hour. Fidel Serrano, on ladder, is one of scores of Panamanians trained by Cítricos de Chiriquí.

each will yield from 1,000 to 1,500 oranges a year." His voice rings with pride when he talks of what is to come.

Ríos, a civil engineer, is a graduate of the University of Panama. He has been responsible for keeping the processing plant running and for the various building projects within the company property, including some 40 miles of asphalt roads in and around the huge estate.

In Soils

His assistant is another young Panamanian agricultural engineer, Eugenio Lee, who graduated from the Technological Institute in Monterrey, Mexico, and also holds a master's degree in soils from the University of California. He is now assistant Chiriquí manager in charge of the company's Agricultural Department.

Another member of the team of Pan-



SPRAYING—Fumigation is widely used for pest control in the citrus fields. Panamanian workers have become experts at this work.

amanian specialists is a University of Florida graduate, Hugo Cortés, an agricultural engineer who is in charge of the Experimental Department—a key operation in a business that must constantly seek ways to improve upon nature itself. Here is one example of the type of work done in this department.

“People today don’t go for plain tastes,” Cortés says. “In many places, orange juice is mixed with the juice of

pineapple, grapefruit and other fruits. Here in Cítricos we grow passion fruit, the juice of which we have found blends excellently with that of orange.”

Cortés also runs the nurseries where the Florida seedlings are grown for grafting with the Panama shoots.

Rich Topsoil

Field work began in 1960. The initial phase was a thorough study of the soil

characteristics that proved the land was of the highest grade. An impressive feature: The layer of rich topsoil runs 5 feet thick in much of the land set aside for planting. Then came nematode (worm) and insect control in preparation for the large-scale planting in 1961. When planting was completed 3 years later, a dark-green carpet formed by 665,000 oranges trees, set in neat
(See p. 8)



FIFTY GALLONS EACH—In the warehouse of Cítricos, Hugo Cortés, an agricultural engineer, points to drums used for exporting orange concentrate. Cortés, a graduate of the University of Florida, is in charge of the firm’s Experimental Department and nurseries.

JUICE WILL FLOW TO WORLD MARKETS

(Continued from p. 7)

rows, lay over the Rovira countryside.

The Rovira area is ideal orange country—the daily temperature ranges from 60° to 80° Fahrenheit; the annual rainfall averages 200 inches but the lay of the land provides effective natural drainage. Nature and man have teamed up to produce first-class oranges in Rovira. The benign weather and the rich soil in the Chiriqui highlands account for the luscious quality of the fruit.

Cítricos' largest mechanical installation is the concentrate processing plant, which can handle as many as 100,000 oranges an hour. The plant is fully automatic, although imperfect fruits are manually eliminated. The speed of the juice extractors is about 400 oranges a minute and the characteristics of design prevent the oil from the peel from mixing with the juice. The fluid is then pumped into the evaporators, which are the heart of the plant, for the last step in the process of producing the concentrate. Every hour the evaporators receive 12,750 pounds of juice which are reduced to 2,750 pounds of concentrate. The concentrate is then placed in 50-gallon tanks and frozen in a cavernous 250,000 cubic-foot storage room where the temperature is kept at 28° Fahrenheit below zero.

"Citropulpa"

The pulp and the rejected fruit are carried by mechanical conveyors to the



Rafael Lezeano
Checks Passion Fruit



Mediterranean Fruit Flies.

"Citropulpa" plant. The mash is mixed with lime to facilitate the extraction of excess water and increase the feed's bonebuilding properties. The mixture then goes into a revolving oven for toasting at 1,600° Fahrenheit. Packing in 80-pound bags is the final step in the production of "Citropulpa."

The company's laboratory is located in a section of the processing plant. A University of Panama graduate, Hortensio Pinilla, Jr., is in charge of a continuous analytical program. Worm and insect identification still is an important part of the work here. Constant aerial fumigation is carried out by Cítricos in the Rovira area.

Cítricos also is helping a project of the International Regional Animal Health Organization for control of one of the most dreaded pests—the Mediterranean fruit fly. Though this insect has not reached dangerous proportions in Rovira, Cítricos is helping in the fight for its eradication in neighboring areas. The project involves population studies and the propagation of millions of sterile male flies.

No operation in Cítricos is left to guesswork. The harvesting time is determined by scientific know-how. Continuous tests on samples of the fruit determine the acidity and sugar content.

Three Hundred Pickers

The picking of the fruit is about the only major operation that is done entirely by hand at Cítricos, where mechanization is the word. At harvest time, about 300 pickers are added to the company's 150 full-time employees.

The Panamanian specialists running

Cítricos de Chiriquí pride themselves in having welded a force of skilled workers. "When we began," Ferrer recalls, "most of our men knew only how to handle a machete. Today we have expert grafters and soil men, first-class fumigators and heavy equipment operators, all trained here. Incidentally, they all are paid above the minimum wage."

Cítricos will reach another milestone soon. Three years from now every one of its 665,000 orange trees will be bearing. Then Rovira's golden harvest will raise production at Cítricos' plants to full-scale production and concentrate from oranges grown and processed in Panama will go to many parts of the world.



Hortensio Pinilla, Jr.
In Charge of Lab



CARIB HIEROGLYPHICS—This 12-foot tall boulder overlooking the Santa Lucia River in Chiriquí Province was inscribed by Carib Indians. The designs have been traced in chalk. The two markings with lines going out from circles represent the “sun of life.” The “fringes” on the top and bottom designs may indicate royalty. This petroglyph is cracked due to extreme heat.

Messages From The Past

Panama's Petroglyphs

By Louis R. Granger

YOU CAN miss them easily enough even when searching, and anyone who has walked up a stream bed or along some of the many valleys in Panama may have seen but not recognized the petroglyphs—huge rocks and boulders on which the Indians left part of their indelibly written history 1,000 years ago.

These large gray masses dot much of the Interior, but to discover them takes more than an adventurous spirit and boundless energy, although these qualities help.

A study of the ancient Carib Indians who are credited with engraving their hieroglyphics, is a must. Warlike, but highly skilled in the arts and crafts, the Caribs chipped out their messages on only certain boulders—those that faced water, either a stream, river, or pond.

The inscriptions invariably face the upstream direction or mountain ranges

where rain clouds first begin to darken the sky. It can be assumed, therefore, that some of the writing may have been for the benefit of the rain god.

The Caribs populated Panama from approximately 900 to 1,500 years ago. Although little is known about their hieroglyphics compared to the writings of the Mayan culture, the petroglyphs may have been used to commemorate certain festivities or religious functions, warnings to other tribes not to trespass and to explain the ways of the spirits.

Sun And Rain

Various sized circles, and symmetrical signs possibly indicating the sun, rain and earth, death masks, and animals such as alligators and monkeys adorn the petroglyphs.

There is one location where Sunday explorers from the Canal Zone and Panama City can, with a bit of effort, examine a petroglyph.

Drive west 46 miles along the Inter-American Highway to Bejuco and turn right at the El Económico store onto a dirt road, the only one there is, located approximately in the middle of the town. It leads to the village of Sorá. About half a mile out of Bejuco you will come to a grove of coconut palm trees. Just to the right, on a hill, will be an outcropping of dark, gray rock, the site of several petroglyphs.

You will have to climb over the larger boulders which overlook the palm grove and examine them closely to find the engravings. The largest one is of a 5-foot alligator. On another boulder, a little farther down the hill where it gets difficult to walk, are many small circles and a symmetrical circular design dug out of the rock's surface.

Other sites where petroglyphs have been found include: El Valle, La Pin-

(See p. 10)



AT BEJUCO—Chalking in a design is Neville A. Harte who has discovered 280 petroglyphs. The figure at right is an alligator. It has legs but they have not been outlined in this photograph.

(Continued from p. 9)

tada, Río Grande, Calobre, Atalaya, Ocú, La Mesa, Soná, Mamey, Boca Baja, Remedios, Caldera, Boquete, Concepción, San Miguel, and El Volcán.

Easy To Miss

To find them is another matter. Weathered over the hundreds of years since the Indians engraved them, a person, unaware of their presence, could stand on a petroglyph and not see the hieroglyphics.

But if you have the time, plenty of it, and the inclination, you can talk to farmers who live in the areas where the petroglyphs are found and know their location.

The writing is not the only significant thing about these stones. On 90 percent of the larger ones are blood basins and drainage canals leading down the sides.

One theory, and there are many connected with the petroglyphs, is that the Carib hieroglyphics were made for certain festivals and ceremonies, and that humans were sacrificed on the rocks to bring good luck to the tribe.

The first petroglyph in Panama was

discovered in 1898, and by 1953 only three were known. But that year, the most zealous petroglyph hunter in the Republic of Panama, Neville A. Harte, began his quest.

In seven years between 1953 and 1960, Harte, now 62 and a retired PanCanal employee, spent all of his spare time and \$12,000 of his own money in searching out the petroglyphs. He discovered and investigated 280 of them traveling by jeep, horseback, dug-out and on foot through the Interior.

A Booklet

Part of his expenses was for a booklet he published titled *Panorama of Panama Petroglyphs*. Copies are in the Canal Zone Library.

Petroglyphs are found throughout most of the world and a charcoal rubbing of one in Hawaii can be seen in the Canal Zone Library-Museum.

The Caribs worshiped various gods and spirits and apparently implored them to give rain, good crops, and animals to hunt. Hunters from various tribes would occasionally travel out of their territory to hunt and possibly plunder villages and graves where much

of the other tribe's wealth and religious totems were to be found.

According to belief, even today, an Indian never dies, but goes to a happier, more plentiful life. Therefore, their wealth consisting of gold ornaments, colorful feathers and pottery was buried with them.

To protect the graves and to keep away pillaging warriors from other tribes, some of the petroglyphs appear to have been engraved with warnings saying that trespassers would be dealt with severely and possibly face death. The death's head design such as the one found at Soná in Veraguas Province may have been a warning sign. The boulder it was engraved on was a sacrificial altar. On the top is a blood basin where humans were sacrificed to the gods.

Grave Robbing

Then, as now, Indian graves were robbed. The Caribs believed that if they could obtain the items placed in the graves of great warriors or tribal chiefs they would receive their power and strength. Today, however, unlawful grave robbing is for the artifacts they may contain.

Many of the petroglyphs are cracked. The theory is that the Caribs may have built fires on the rocks as part of their ceremonies. During his investigations, Harte has found modern-day coins in some of the cracks indicating that some of the natives of the Interior still regard these strange boulders with ancient carvings as more than mere large stones, and throwing a coin or two within the crack might bring them luck.

Although Harte admits he is only an amateur archeologist, he discounts one theory for the purpose of petroglyphs given by some American archeologists.

"A lot of Americans think these are



MAYAN—One of the most intricate petroglyphs is this one near Las Palmas in Veraguas Province. The design is similar to that of the Mayan culture.

only signs to the Indians that there was good hunting in that area. That's a lot of hokey because they would know whether there was good hunting there without having to read signs," he said.

A reason for some of the petroglyphs was for grave markers. Circles represent graves, explains Harte, who proved this theory by actually finding grave sites indicated by the circles found on a petroglyph.

Buried

Some of the boulders Harte discovered had to be dug up from under several feet of earth. It is still a mystery why some were buried, but one possibility is that the invading Spanish saw them and decided to hide them from the Indians as punishment. Some of them may have been placed over graves and sunk down. Whatever the reason, the buried ones were kept in better condition because they were away from the weather.

Through his studies, Harte has found that there was no variation either in the depth or width of the inscriptions on any of the rocks. Each engraved line was a quarter of an inch deep and five eighths of an inch wide.

"This indicates that they used the same type of tools to make the engravings," Harte said.

How Harte was able to discover the petroglyphs was a combination of instinct, knowing a lot about what he was looking for, and hard work.

Dedicated to the hunt, Harte said his instincts often led him to the right place. He would then look for broken rock and chips which remained over the years. "When I found a stone where it wasn't supposed to be then I knew there was something interesting there."

3 Days

The petroglyphs not buried invariably became covered with moss, vines, and other types of vegetation. He has spent as much as 3 days cleaning off a boulder to get down to the engravings.

Once a petroglyph has been cleaned, Harte uses chalk to outline the designs so they will stand out more clearly to be studied and photographed.

Harte was born in England. By the time he was 11 years old he was interested in archeology and dug in the Roman ruins around Great Britain. He moved to the United States at 16 and came to Panama 28 years ago from Florida.

"I planned to stay in Panama for 6 months, but then I got interested in the local history and I forgot all about the time," he said.

It is likely that some petroglyphs are



Death's Head

Sacrificial Alter

still to be found in Panama. But before you pack your picnic hamper and scurry off to the nearest stream, think again.

First, you must have a government permit to dig in the Republic. It would probably take you days on end to find a petroglyph, and when you did, you would have to spend several more days cleaning it off. It would cost you money to pay your way there and back and for workmen to help you dig up a boulder. And since it would be next to impossible to take the petroglyph home, the best you could hope to wind up with would be a photograph.



FAR FROM CIVILIZATION—Near La Pintada in Coclé Province, Harte examines a petroglyph at a dry stream bed. During the rainy season water will cascade over this large, flat rock. Many petroglyphs are in the area.

SHIPPING

Korean Shipping

ONE OF the first of several new vessels being built for the Korean Shipping Corp. is the MV *Korean Pioneer* which is now making regular trips through the Panama Canal from the Far East to U.S. ports.

The Korean Shipping Corp. of the Republic of Korea was established in 1950 and began operation with the acquisition of some old Korean tonnage and 12 ships chartered from the United States. By 1964, the company maintained liner services to Thailand, Japan, and other Far East areas.

Although the major stockholder has been the Republic of Korea itself, recently the company began turning over stock to private capital. Boyd Bros. represents the line at the Panama Canal.

Retirement Cruise

THE PANAMA CANAL will be a port of call next March for the Moore McCormack liner *Argentina* which will be making a 47-day "Prelude to Retirement" conference cruise around South America.

Chartered by a new organization known as Prelude Inc., the ship will have on board 200 near-retirement-age executives from large corporations and their wives. The cruise is designed to set the stage for a positive approach to retirement. Nearly 60 hours will be devoted to lectures and panel discussions by top-flight gerontology experts

who will talk on how to enjoy an active retirement.

The cruise is scheduled to leave New York March 7, 1970, passing through the Panama Canal and down the west coast of South America, calling at ports in Peru, Chile, Uruguay, Brazil, and the West Indies before returning to New York. Tours are being organized in Panama, the Canal Zone, and at most port cities.

PANAMA CANAL TRAFFIC STATISTICS FOR FIRST 9 MONTHS OF FISCAL YEAR 1969

TRANSITS (Oceangoing Vessels)

	1969	1968
Commercial	9,674	9,787
U.S. Government	1,046	1,088
Free	44	83
Total	10,764	10,958

TOLLS*

Commercial	\$64,383,292	\$61,734,257
U.S. Government	6,445,040	6,669,827
Total	\$70,828,332	\$68,404,084

CARGO**

Commercial	74,054,281	70,863,957
U.S. Government	5,660,210	6,207,596
Free	74,871	368,717
Total	79,789,362	77,440,270

* Includes tolls on all vessels, oceangoing and small.

** Cargo figures are in long tons on all vessels, oceangoing and small.

FLIP Transits Canal

ONE OF the most unusual Panama Canal customers recently was the oceanographic ship *FLIP*, which is short for Floating Laboratory Instrument Platform. The vessel was towed into Balboa April 13 by the U.S.S. *Calmia* and was picked up in Cristobal by the U.S.S. *Salish* and taken to Barbados. She will be engaged during the next few months in one of the greatest scientific expeditions ever organized to study the way in which the ocean affects major weather patterns.

When the 355-foot long *FLIP* is at her work station in the Atlantic, her ballast tanks will be flooded to "flip" her to the vertical position. When she is fully vertical, 55 feet of the vessel will be above the water line, while the remaining 300 feet will extend into the ocean. She has done this 138 times in Pacific Ocean operations. Her above-water working space accommodates 10 scientists, 6 crew members, laboratories, sleeping quarters, galley, and mess hall.

FLIP is operated for the office of Naval Research by the Scripps Oceanographic Institute of San Diego. In the Caribbean she will take part in BOMEX, the U.S. Department of Commerce's Barbados Oceanographic and Meteorological Experiment.

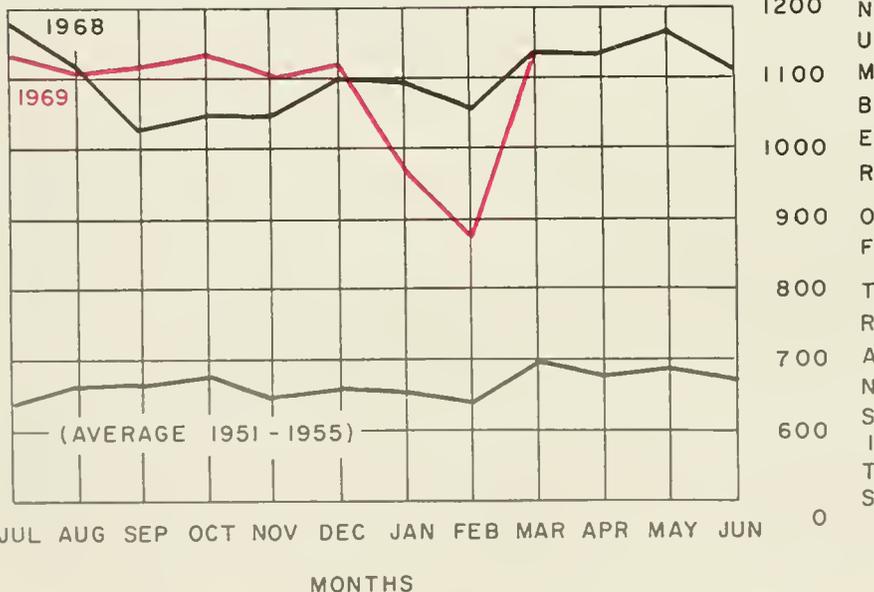
Shipping agent for *FLIP* during her transit was Panama Agencies Co.

Cruise Picnic

A BARBECUE picnic on the island of Taboga has been planned for the passengers aboard the Matson Line's SS *Monterey* due at Balboa June 5 from the west coast of the United States. This will be the line's first venture into South American waters and the first time that a trip to Taboga has been included in the shore excursion plans of any visiting cruise ship.

In addition to the picnic at Taboga, the passengers will have a complimentary boat ride through the Panama Canal aboard the launch *Islamorada*. They will return to the Pacific side aboard the Panama Railroad.

According to Panama Agencies, which will represent the Matson Line here, the ship will call at the Canal and stop at Balboa until June 7 after visiting Acapulco, Mexico; the Galapagos Islands and Guayaquil, Ecuador, and Lima, Peru.



Country Fairs . . .



The scene here at La Chorrera is typical as thousands of persons head for the fairs throughout the Interior of Panama.

THE RASPADO (snow-cone) vendors hawking their wares under a hot sun, the joyous laughter of little children, blaring music emerging from numerous loudspeakers creating a cacophonous symphony, and everywhere, teeming crowds of humanity move and mingle as they tarry before the attractive displays.

These are the sights and sounds greeting visitors to the Panama regional fairs held annually during dry season at Ocú, La Chorrera, David, Los Santos, and in September, at Bocas del Toro. Always popular events, the fairs at David, La Chorrera, and Los Santos this year attracted approximately 300,000 visitors or about one fourth of the Republic's population. The smallest of the regional fairs held at the Interior town of Ocú drew some 30,000 visitors, and Bocas del Toro, accessible

only by air or sea, brought more than 12,000 viewers to its displays and beautiful beaches. Primarily agricultural in nature, the fairs have commercial and industrial exhibits which permit the local inhabitants to display and sell the wares they produced during the year.

Many people and numerous agencies participate in these regional fairs, along with the local vendors and exhibitors. Panama's industrial giants such as Destiladora Nacional, S.A.; Vinícola Licorera, S.A.; Cervecería Nacional and many others set up exposition booths at the fairs, as do Panama Government agencies directly related to the economic growth of the Interior regions—the Ministry of Agriculture, Commerce and Industries and the Panama Tourist Institute.

The Panama Canal participates act-

ively in these events, providing exhibits on Canal operations, photographic displays, free rides for children on the popular burros, Mancha and Gato, and other features. The U.S. Southern Command, with its Army, Navy, and Air Force components, also provides exhibits and feature attractions at the regional fairs.

The U.S. Information Service and the U.S. Agency For International Development in a joint effort supply the fairs with an Alliance For Progress For Panama display. In addition, a number of special groups are brought to the fairs from the Canal Zone by both PanCanal and the U.S. Southern Command to perform in the fairgrounds and augment the program of events.

Everywhere fairs attract people, and

(See p. 14)

. . . Panama Style!



Military sky divers approach the target area near the U.S. Southern Command display.



"Look at the lights!" seems to be what this comely visitor is saying to her young companion as they watch the electrical map display at the Panama Canal pavilion.



Out-of-town visitors shop for natives hats at one of the many booths.

This smiling beauty surrounds herself with native arts and crafts. At left are a Cana sailboat and a framed mola, and in background is a painting of a Guaymí Indian mother with her baby.



(Continued from p. 13)

Panama fairs are no different. Visitors from the Canal Zone and Panama City head to even the most distant fairs to buy the local goods, try the native food, explore the hidden charms of the rural areas and to make new friends. Friends and fun go hand-in-hand with good times and pleasant memories when you visit a country fair—Panama Style!

As the United States and Panamanian flags wave in the breeze, a crowd gathers around the Balboa High School Band. The music has also drawn one of the many riders who got to the fairs on horseback rather than by automobile.

With the winning lottery numbers clearly shown, a woman takes an order at one of the many native food stands. Visitors can sample a variety of local dishes at the end of a busy day at the fair.

Cattle exhibits dominate the livestock shows at all the fairs. Ranches compete by sending prize animals to each event.



SUBMARINE TRAGEDY SETS STAGE FOR HEROES



ILL FATED SUBMARINE—The U.S. Navy's O-5 in calmer days before the fateful collision in Limon Bay off Cristobal in October 1923. The number 66 refers to the hull number given by the contractor.

THE MEN of the U.S. Submarine O-5 were roused out of their racks before dawn for a Sunday transit through the Panama Canal. The O-5 had orders to escort three other submarines through the Canal from Cristobal to deep water on the Pacific side.

Routine duty, actually. The O-5, commanded by Lt. Harrison Avery, was attached to Commander Submarine Base, Coco Solo, and received such orders matter of factly.

Women, Whisky

Like most sailors during the rather quiet 1920's in Panama, the men moved around the 173-foot vessel performing their duties in an unhurried but exact way. The 21 officers and men quietly chatted about the usual things—women, whisky, the heat and rain, and plans for their next liberty.

Early risers that Sunday October 28, 1923, may have been leafing through the morning edition of the *STAR & HERALD*. On page 5, Hollywood was advertising "Thrills! Pathos! Smiles!" in Mack Sennett's movie "Suzanna." As they read, another Hollywood-like melodrama with all of Mack Sennett's thrills, pathos plus tragedy and heroics was taking place in Limon Bay, Cristobal.

At 6:25 a.m. the O-5 was a dead ship in 6 fathoms of water on the bottom of the bay. She had a 10-foot-long gash in her bow . . . three men were dead, one of the bodies was never found . . .

two of the survivors were trapped inside . . . and another chapter to submarine history was launched.

During the next 31 hours the O-5, which never saw duty again, became the stage for heroes.

The event became one of the most pictorially documented stories of submarine salvage ever made. It created an underwater record when a Canal Zone diver in his rescue attempts made the longest dive up to that time. Also, it became the first attempt at physically lifting any vessel the size of the 520-ton O-5 off the ocean bottom.

At a time when modern rescue and safety devices did not exist, and while submarines were still in their infancy, it was a remarkable feat that the two men trapped in the O-5 were not only saved, but that their submarine was raised at all. Rescue of personnel from disabled submarines was not duplicated until 16 years later when 33 men were saved from the U.S.S. *Squalus* using a special submarine chamber.

Receives Orders

That historic day for the O-5 began before dawn with the arrival from Havana of the SS *Abangarez*, a 380-foot, 5,000-ton freighter owned by the United Fruit Co. Shortly after 6 a.m. Capt. W. A. Card, master of the *Abangarez*, received orders to proceed to Dock No. 6, Cristobal.

It was a collision course. The O-5

was leading submarines O-3, O-6, and O-8 to Gatun Locks. At 6:22 a.m. Captain Card, seeing that collision was imminent, sounded a danger signal—the first warning given by either vessel. The *Abangarez* then backed emergency full speed and let go her starboard anchor.

Without acknowledgment of the danger signal, the O-5 held her rudder amidships and continued on a southerly heading.

Sinks By Bow

At 6:24 the *Abangarez* struck the starboard side of the submarine penetrating the engineroom and the No. 1 main ballast tank. The O-5 rolled to port about 15 degrees, righted, and in less than a minute sank bow first. The freighter was undamaged.

At a board of inquiry which placed the blame of the collision on the O-5, Captain Card said: "Just before we struck, I heard someone call from the submarine's conning tower for everyone to come from below. When we struck, someone ordered the O-5 crew to jump."

Sixteen men were quickly rescued but five were missing. They were: Henry Breault, torpedoman second class; Lawrence T. Brown, chief electrician's mate; Clyde E. Hughes, motor machinist's mate first class; Thomas T. Metzler, fireman first class; and Fred C. Smith, mess attendant, first class.

Two days later the bodies of Metzler and Smith were found floating in the

sea off the Colon breakwater. Hughes was never seen again.

Rescue work started almost immediately. Navy divers on a salvage tug stationed at Coco Solo had arrived to survey the sunken submarine. Their raps on the O-5's hull brought immediate response from inside—Breault and Brown were alive in the forward torpedo room.

But the divers were helpless to rescue the trapped men. Artificial lungs and rescue chambers to enable men trapped in a submarine to escape had not been invented and there were no salvage pontoons within 2,000 miles of the Canal Zone. Therefore, a means to lift the submarine's bow off the bottom was necessary. In the Panama Canal there were two 250-ton capacity floating cranes, the *Ajax* and *Hercules*. These leviathans had the mightiest lift in the world for floating equipment. They were specially built in Germany to handle the enormous lock gates of the Canal.

Request Crane

Capt. Amon Bronson, Jr., USN, Commander Submarine Base, Coco Solo, was in charge of the O-5 salvage operation and requested the Panama Canal to furnish one of the floating cranes to haul up the sunken vessel.

But it was not going to be just that easy. A slide had just occurred in Gailard Cut, the narrowest part of the

Canal, and both cranes were on the opposite side, miles away from the O-5. Ironically, this was the first slide to block the Cut since 1916.

Working to remove the slide were two huge dipper dredges, the *Cascadas* and *Paraiso*, which by 2 p.m. had cleared a narrow passage for the *Ajax*. The crane squeezed through and was over the O-5 about 10:30 p.m.

Before the arrival of the *Ajax*, Panama Canal salvage forces had assembled over the submarine. Among them was Sheppard J. Shreaves of Newport, Va. "Shep," 38, was dockmaster and foreman shipwright for the Panama Canal Mechanical Division. (Now the Industrial Division of the Marine Bureau.)

Volunteers

Barrel-chested and tough, Shep was a qualified diver and supervisor of the Canal's salvage and diving crew. Rather than risk the lives of his men on the treacherous underwater assignment, he decided to make the dive himself, tunnel under the O-5, pass through the lifting cable and secure it to the hook of the *Ajax*.

Here is his account of the rescue efforts on the O-5.

"I could spot the O-5 on the bottom by the air bubbles exhausted from the compartment where Breault and Brown were trapped. To survive, they were bleeding air from 3,000-pound compressed air reserves in the forward torpedo room.

"Since the Navy divers had given me a good briefing on the position of the O-5 and the location of the two trapped men, I went right in through her side. The light of my lamp was feeble against the pitch black. The inside was in an awful mess, and it was tight and slippery going. I was constantly pushing away floating debris. When I reached the forward bulkhead of the engineroom I hit it with my diving hammer. Faint raps were returned. Breault and Brown were alive. I acknowledged their taps, but almost with a feeling of hopelessness because I couldn't do anything for them at the time."

Shreaves then made his way out of the submarine and signaled for a firehose to be lowered.

"The O-5 lay upright in several feet of soft, oozing mud, and I began water jetting a trench under the bow. Sluicing through the ooze was easy; too easy, for it could cave in and bury me.

"Swirling black mud engulfed me, I worked solely by feel and instinct. I had to be careful that I didn't dredge too much from under the bow for fear the O-5 would crush down on me. Once



Sheppard J. Shreaves

A Sleepy Hero

in a while, I'd rap the hull with the nozzle to let the boys know someone was working to bring them out. Their raps were returned weaker each time."

Finally, the tunnel was through. A 4-inch-diameter steel cable was dragged under the keel and shackled to the hook of the *Ajax*.

Aside from its flooded weight, there was tremendous mud suction hugging the O-5. Twice the cable broke and each time new cable was wrestled under the bow. By early morning of the 29th, round-the-clock efforts to raise the submarine had failed. Shreaves surfaced occasionally to report to Captain Bronson and to allow doctors to examine him. They were concerned that his extreme exertion while working under pressure at 36 feet down might strain his heart. He had been underwater for nearly 24 hours.

Boiling Cauldron

"I came up from what I hoped would be my last dive. I was near exhaustion. The job below was done and we were ready for a third lift. At 12:30 p.m. on the 29th, from topside, I released compressed air into the engineroom of the O-5 to unroof that compartment and lighten the boat. Water and mud bubbled to the surface as in a boiling cauldron . . . I signaled the *Ajax* to slowly lift the O-5.

"God, how we prayed the cable would take it this time. The intense silence of the rescue force and spectators was electrifying—almost unbearable."

After what must have seemed a lifetime, the bow finally broke surface. When the hatch was clear the two trapped men crawled out, more dead

(See p. 18)



The "Ajax"

Mechanical Hero

(Continued from p. 17)

than alive. They were taken to Coco Solo and placed in a decompression chamber, and later transferred to Colon Hospital for examinations.

"I was a big hero for a while," said Shreaves. "The boys carried me around on their shoulders. Everybody rushed down to the Stranger's Club in Colon for a big celebration. But me, I went to sleep at the party."

The O-5 incident established a world record. Shreaves had made dives of the longest duration to that time.

He was presented a Congressional Lifesaving Medal on recommendation of the Acting Canal Zone Governor, Harry Burgess, and was given a 14-carat gold watch donated by 800 grateful members of the Coco Solo Submarine Base.

There emerged, however, another hero of the O-5 sinking.

Breault, 23, of Putnam, Conn., was in the forward torpedo room at the time of the collision. He escaped to the main deck, but then realized that his friend, Brown, was asleep in the forward battery room. Breault went back into the sinking submarine, closing the hatch cover as he slid below. Brown had not



Henry Breault
Earns Medal

heard the order to abandon ship. With water charging in on them, they attempted to escape through the conning tower, but the deluge blocked that route. They struggled back into the torpedo room and forced shut its watertight door as the O-5 hit bottom.

It was for Breault's act of selflessness and valor by going to the assistance of his shipmate, even though realizing the O-5 was doomed, that he was

awarded the Congressional Medal of Honor by President Calvin A. Coolidge on March 8, 1924.

History closed in tight around Torpedoman Breault and the only known record available is with the Congressional Medal of Honor Society which said in January 1969, that he has been dead for many years.

Captain Card of the *Abangarez* retired in 1953 after 51 years in the merchant marine. He now lives in Millbrae, Calif. The collision with the O-5 was the only maritime accident during his career.

Chief Electrician's Mate Brown has also died, and there is no information available on the whereabouts of Lieutenant Avery.

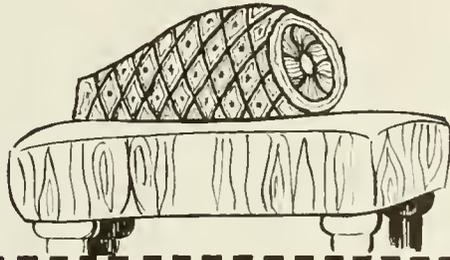
With more than 1,000 dives behind him, Shep retired to St. Petersburg, Fla., on December 31, 1945, after 32 years of Panama Canal service. He died in January 1968.

Material for this story was compiled by Capt. Julius Gri-gore, Jr., USNR, supervisor of shipbuilding, conversion and repair for the 15th Naval District, Fort Amador. ⚓



SAVED FROM WATERY GRAVE—The USS O-5 is raised by Panama Canal crane "Ajax" during salvage and rescue operations. Two men who were trapped in engine room are shown shortly after rescue. One is in white T-shirt being helped off deck. The other is kneeling on deck holding a wire stay. They are: Lawrence T. Brown, chief electrician's mate, and Henry Breault, torpedoman second class.

CULINARY CAPERS



"GO ON, give it a good shake," says the gracious hostess indicating a big enamel pot to a guest. "Shake it up good" adds Mrs. Pat Morgan as she turns to welcome the next arrival. The occasion is the Garden Club buffet held the second Tuesday of each month at Morgan's Garden on Gaillard Highway near Corozal.

By inviting the guests to jostle the contents of the pot, Mrs. Morgan is actually involving her dinner guests in the preparation of a delectable dish which will enhance the principal course of the menu—a juicy barbecued filet of beef, done to perfection, served with wine-spiked baked beans, tossed salad, and a simple dessert.

The edibles in the jerking, jouncing pot were once paid tribute as a "kitchen-god"—*onions*—full-flavored and pungent, being "bruised" in a tumbling process; always a favorite with the garden clubbers attending the Tuesday soiree, a Canal Zone event for the past 20 years.

Although Mrs. Morgan needs no bouquet throwing for flower growing and arranging, and her contribution to life on the Isthmus has been recognized by the Panama Government with the presentation of the Order of Vasco Núñez de Balboa, this article makes a deep bow to her "bruised" onions.

It's The Sulfur

From earliest recorded time the onion has held high esteem in the annals of cookery. Low in calories, wholesome and nutritious, the onion is both a delight and despair to the gourmet. It is delicious to the palate, yet objectionable for the offensive odor it leaves on the breath. This is due to the pungent volatile substances absorbed by the blood, which are carried to the lungs, where they are set free. The strong smell and flavor comes from the oil, rich in sulfur. It is the essence of this sulfur that brings on the tears, too.

Whether or not one is a good cook depends largely on the skillful use of onions. Cookbooks contain very few recipes, with the exception of desserts, which do not have at least a trace of onion. A thin slice of onion or a few drops of its juice has saved many a dish from dullness.

'A precious gift from the East to the West, the onion originated in northern Asia and Palestine. It is mentioned in old Hebrew literature and drawings of it are found on monuments in Egypt. As a "kitchen-god" in Egypt, it was paid

special tribute and the Egyptians made their oaths by it. The Bible also speaks of its merits.

In Egypt, as well as Greece, the onion was thought to give physical strength and was fed to soldiers to give them courage in battle. It also was believed to have aphrodisiac qualities.

American Debut

Cultivated in Europe from the time the Crusaders brought it back from their expeditions, the onion probably made its debut into the American kitchen in the early 17th century. Today, its hundreds of varieties are grown in all parts of the world. When grown in warm climates, it is milder and somewhat sweeter than the northern variety.

Strange as it may seem, the fragrant lily and the onion belong to the same family, the *lilaccas*. Other members of the family are the chive, the shallot, the scallion, and the leek, the latter being the emblem of Wales.

Yellow onions are preferable for soups, stews, sauces, and are also good raw. White onions, a little more expensive, are not necessarily milder, but small white onions are excellent served

whole in stews or creamed. The purple ones, called California, Spanish, or Italian, are beautiful in salads but a little too sweet for cooking. No matter what color, a moderate size onion contains approximately 91 percent water.

To A Frazzle

Comparing its utilization with other vegetables, the versatile onion has most of them beaten to a frazzle. Onions are boiled, baked, creamed, scalloped, glazed, grated, stuffed, smothered, fried, sauteed, pickled, roasted, toasted, chopped, sliced, minced, scraped and "bruised," depending on whether they are to be used as a vegetable or to add flavor and a little zip to a dish. Due to this versatility, the onion has made a profound impression on cookery. A good cook knows exactly what to do with it.

Here is the recipe for preparing Mrs. Morgan's "bruised" onions: For a regular family size portion, slice about eight medium sized yellow onions into rings into a pot or receptacle large enough to shake them in. Add about 3 tablespoons each of salad oil and vinegar and 1 tablespoon sugar. Shake the pot and then let marinate a few minutes. Then shake and "bruise" the onion rings. Prepare them 2 to 4 hours before serving and shake often, the more, the better, as the marinade penetrates the raw onion rings in the process. Serve with meat course.

F. H.



ONION TREAT—Recovering from a snake bite and fractured wrist, Pat Morgan prepares "bruised" onions for the Garden Club.

CANAL COMMERCIAL TRAFFIC BY NATIONALITY OF VESSELS

Nationality	First 9 Months, Fiscal Year					
	1969		1968		1961-65	
	No. of transits	Tons of cargo	No. of transits	Tons of cargo	Avg. No. transits	Avg. tons of cargo
Belgian	87	111,277	81	221,159	34	129,660
British	1,074	8,730,616	1,085	8,489,594	962	6,205,633
Chilean	80	557,341	86	504,235	90	635,775
Chinese (Nat'l.)	93	649,100	78	549,949	58	416,564
Colombian	137	410,005	155	326,100	191	300,332
Cuban	32	317,487	18	189,784	2	5,369
Danish	279	1,613,433	344	1,946,096	225	1,094,336
Ecuadorian	44	53,727	124	123,583	32	37,602
Finnish	32	191,640	28	145,133	17	71,349
French	183	789,779	152	798,862	103	551,340
German	864	3,286,373	974	3,864,462	837	2,516,154
Greek	391	4,401,580	312	3,354,129	470	4,571,535
Honduran	153	96,131	141	79,294	155	121,136
Israeli	72	483,444	80	420,278	49	191,206
Italian	197	1,270,506	197	1,537,651	141	828,450
Japanese	795	6,750,180	775	5,956,592	625	3,644,188
Liberian	1,190	18,238,702	1,144	15,013,880	692	6,781,206
Mexican	79	331,340	36	75,906	16	50,956
Netherlands	343	1,786,190	334	1,458,909	457	2,075,590
Nicaraguan	39	68,991	57	91,045	38	56,811
Norwegian	999	10,441,949	1,117	12,113,095	1,065	7,961,315
Panamanian	462	1,982,080	373	2,015,767	336	1,453,025
Peruvian	130	599,521	132	621,047	86	409,523
Philippine	69	359,124	69	305,595	51	220,593
Soviet	70	502,118	66	438,035	16	122,837
Swedish	371	2,484,246	340	2,216,788	275	1,608,182
United States	1,125	5,605,069	1,208	6,286,651	1,273	7,597,402
All Others	284	1,942,332	281	1,720,338	120	559,480
Total	9,674	74,054,281	9,787	70,863,957	8,416	50,217,549

MONTHLY COMMERCIAL TRAFFIC AND TOLLS

Vessels of 300 tons net or over—(Fiscal years)

Month	Transits			Gross tolls* (Thousands of dollars)		
	1969	1968	Avg. No. Transits 1961-65	1969	1968	Average Tolls 1961-65
July	1,122	1,177	960	7,089	7,400	4,929
August	1,109	1,117	949	7,362	6,751	4,920
September	1,115	1,023	908	7,473	6,370	4,697
October	1,138	1,048	946	7,471	6,754	4,838
November	1,103	1,041	922	7,279	6,672	4,748
December	1,119	1,100	946	7,571	7,133	4,955
January	958	1,094	903	6,715	6,916	4,635
February	875	1,055	868	5,780	6,686	4,506
March	1,135	1,132	1,014	7,616	7,027	5,325
April		1,132	966		7,300	5,067
May		1,168	999		7,493	5,232
June		1,112	954		7,405	5,013
Totals for fiscal year		13,199	11,335		83,907	58,865

* Before deduction of any operating expenses.

TRAFFIC MOVEMENT OVER MAIN TRADE ROUTES

The following table shows the number of transits of large, commercial vessels (300 net tons or over) segregated into 8 main trade routes:

Trade routes	First 9 months, fiscal year		
	1969	1968	Avg. No. Transits 1961-65
United States Intercoastal	270	279	330
East coast United States and South America	1,026	1,167	1,771
East coast United States and Central America	492	470	372
East coast United States and Far East	2,234	2,233	1,655
East coast United States/Canada and Australasia	298	312	241
Europe and west coast United States/Canada	738	744	719
Europe and South America	969	1,043	908
Europe and Australasia	327	330	286
All other routes	3,320	3,209	2,135
Total traffic	9,674	9,787	8,417

OIL POLLUTION BEING STUDIED IN CANAL ZONE

AN INTENSIVE study of the problems of oil pollution and oil spill disposal is being made by the Panama Canal Marine Bureau and other U.S. Government agencies concerned with possible damage to their facilities here.

With an average monthly traffic of 170 to 175 tankers, more and more of them in the supership class, the possibility of a massive oil spill in the Canal has become greater.

The problems arising from a large spill of oil or hazardous material first received world-wide attention in 1967 when the supertanker *Torrey Canyon* ran aground and split open off the coast of England.

This disaster was the first of its kind and magnitude and there was no precedent for its treatment.

A similar mishap occurred off Puerto Rico when the *Ocean Eagle* grounded at the entrance to San Juan Harbor. The resort beaches were blackened with thick oil and hundreds of waterfowl were suffocated.

The Panama Canal, so far, has been relatively fortunate. The most notable mishap occurred December 23, 1955, when the tanker *Andros Venture* struck the east bank north of Pedro Miguel Locks. One of the tanks was holed and crude oil poured into the Canal waters in the Gaillard Cut area.

Canal employees hurriedly improvised a log boom that was used to contain the oil slick and directed the spillage through Pedro Miguel Locks. After that, some of it was taken into the third locks cut and the remainder locked through Miraflores Locks to sea.

Last December, the tanker *Witwater* broke in two outside the Cristobal Breakwater after receiving a cargo of 25,000 barrels of bunker "C" fuel and nearly 11,000 barrels of diesel oil at Las Minas Bay. Approximately 14,000 barrels spilled into the sea. Of this, 500 barrels accumulated in the Fort Randolph area and the rest spread along the shoreline in the vicinity of Galeta Island and the breakwater. Fortunately, the breakwater prevented much of the spillage from entering the harbor.

Those persons most concerned over the results of this oil spillage were the staff members of the Smithsonian Tropical Research Institute who had been studying the ecology of reefs and man-

grove swamps off Galeta Island for the past 8 years. Their study areas were threatened with destruction.

There was no effective method at hand for removing the oil. Attempts were made to disperse it with chemicals and to burn it by soaking bales of hay with kerosene and distributing them throughout the spill pool and igniting them. The attempts were only partially successful.

This was an unfortunate accident but not dangerous to the Canal. But what if a massive oil spill were to occur in the Canal itself or within the harbors? It would not be just a matter of polluting resort beaches or killing waterfowl and fish. Such an event could interrupt transits and endanger other ships using the Canal.

Meetings to discuss possible solutions and firm up an approach to planning for handling oil spill emergencies were held by representatives of the Canal organization, the U.S. Armed Forces and the Smithsonian Tropical Research Institute.

Some of the possible solutions to provide capability to effectively control and dispose of oil products spilled into the Canal and harbors include various chemicals (dispersants and emulsifiers) and absorption materials now on the market and under test by the Marine Bureau. Materials and equipment have been ordered to be on hand at Balboa and Cristobal harbors and at Gamboa.

They consist of two pumps with eductors for applying liquid chemicals used in oil dispersal and eight drums of two of the leading dispersants now available. Also ordered is 800 feet of "slikbar oil-spill boom" consisting of 9-foot sections connected together so that it can be stowed accordion-fashion ready for deployment to contain oil spills. Present plans are to store the oil boom at Gamboa, and possibly purchase shorter booms for containing bunkering spills in each of the port terminals.

A ton of straw has been ordered and will be used as an absorbent to remove oil during clean-up operations after the bulk of an oil spill has been removed.

The Marine Bureau has made arrangements with chemical companies and the U.S. Air Force to airlift supplies to the Canal Zone in an emergency. Also, emergency kits consisting of a skimmer, pump and oil container are under development by the U.S. Coast Guard to be flown to an oil spill site should the need occur.

Marine Bureau personnel are now investigating the various methods and means of combating oil pollution in order to develop a pollution plan.

PRINCIPAL COMMODITIES SHIPPED THROUGH THE CANAL

(All cargo figures in long tons)

Pacific to Atlantic

Commodity	First 9 Months, Fiscal Year		
	1969	1968	5-Yr. Avg. 1961-65
Ores, various	3,169,177	3,604,090	762,731
Boards and planks	2,663,054	1,320,779	N.A.
Iron and steel plates, sheets and coils	2,131,373	908,976	N.A.
Sugar	1,999,273	2,010,299	1,702,895
Fishmeal	1,412,494	1,238,895	N.A.
Food in refrigeration (excluding bananas)	1,006,916	1,019,325	659,362
Metals, various	985,060	994,320	870,499
Pulpwood	909,899	684,584	376,192
Bananas	849,757	975,116	859,357
Iron and steel manufactures, miscellaneous	802,108	1,349,464	N.A.
Plywood and veneers	669,285	448,353	N.A.
Wheat	628,654	628,254	976,115
Petroleum and products	573,961	1,220,059	1,434,746
Potash	568,462	383,361	22,563
Canned food products	459,361	554,515	739,746
All others	7,918,768	8,509,898	14,290,452
Total	26,747,602	25,850,288	22,694,658

Atlantic to Pacific

Commodity	First 9 Months, Fiscal Year		
	1969	1968	5-Yr. Avg. 1961-65
Petroleum and products	11,886,351	11,309,224	8,352,069
Coal and coke	11,543,869	9,275,908	4,430,533
Phosphates	3,532,425	2,981,462	1,583,682
Metal, scrap	1,897,167	2,393,275	1,994,208
Soybeans	1,888,242	1,822,578	1,117,075
Corn	1,883,668	2,037,397	1,132,893
Ores, various	1,399,842	1,459,718	223,574
Sorghum	1,137,322	956,737	N.A.
Metal, iron	1,064,541	1,805,149	146,018
Wheat	766,613	720,898	690,950
Sugar	762,989	723,171	418,323
Paper and paper products	596,602	522,177	313,189
Chemicals, unclassified	567,407	596,388	477,983
Autos, trucks and accessories	427,063	376,580	243,972
Fertilizers, unclassified	400,005	365,503	283,699
All others	7,552,573	7,667,504	6,114,722
Total	47,306,679	45,013,669	27,522,890

CANAL TRANSITS – COMMERCIAL AND U.S. GOVERNMENT

	First 9 Months, Fiscal Year				
	1969		1968	Avg. No. Transits 1961-65	
	Atlantic to Pacific	Pacific to Atlantic	Total	Total	Total
Commercial vessels:					
Oceangoing	4,747	4,927	9,674	9,787	8,416
Small °	242	191	433	417	412
Total Commercial	4,989	5,118	10,107	10,204	8,828
U.S. Government Vessels: °°					
Oceangoing	577	469	1,046	1,088	185
Small °	56	36	92	90	121
Total commercial and U.S. Government	5,622	5,623	11,245	11,382	9,134

° Vessels under 300 net tons or 500 displacement tons.

°° Vessels on which tolls are credited. Prior to July 1, 1951, Government-operated ships transited free.



NAVIGATORS—John H. Stevens, in uniform, a past commander of the Canal Zone Pacific Power Squadron, teaches an advanced piloting course. He and R. F. Hesch, left, the incumbent commander, look at a compass. Col. John Allis, squadron treasurer, sights through a pelorus, an instrument for taking bearings. Looking on is Kenneth E. Lake.

TURNING LANDLUBBERS INTO SEAMEN

By Luis C. Noli

ISTHMIAN LANDLUBBERS who turn into sea lovers (an understandable metamorphosis because of their natural surroundings) find themselves inclined to give expression to their newly acquired passion through the sport of boating. Like the poet B. W. Procter, they are beckoned by the expanse of the ocean:

"The sea! the sea! the open sea!

"The blue, the fresh, the ever free!"

But fear of the unknown is apt to keep landlocked many a man suddenly enamored of the deep. He need not despair.

A group of dedicated boating enthusiasts in the Canal Zone stands ready to unlock for him the secrets of power and sail boating—at least enough of them to make the sport safe and enjoyable. It is the Canal Zone Pacific Power Squadron—a unit of the United States Power Squadrons—which is about to complete its 20th year of activity on Isthmian waters. One of 375 power squadrons in the world, the Canal Zone unit seeks to promote the sport of boating with emphasis on safety through knowledge. This it does by imparting knowledge through teaching.

Once a year, volunteer qualified instructors from the Canal Zone squadron take as many as 200 budding boatmen for what is jokingly known in power squadron parlance as "keelhauling"—a course in piloting. The term comes

from a cruel practice in the olden days of seafaring; hauling a man under the keel of a ship as a punishment or a mode of torture. There is nothing punitive or torturous about the course taught by the Canal Zone Pacific Power Squadron, except for the agony that every student—young or old—is apt to suffer. The fact that only about half the starting number of students in every class reaches the final examination is evidence, though, that the course is not strictly for fun.

The Beginning

Thus it has been since the first power squadron course taught in the Canal Zone, which, incidentally, marked the beginning of the local organization on March 31, 1949. Of 31 boating enthusiasts who attended that first course, on piloting, 14 reached the end.

Those first 14 "graduates" and their instructor, William M. Clark, Jr., formed the charter membership of the Canal Zone Pacific Power Squadron. Clark, an engineer who had been a member of the Stamford, Conn., Power Squadron, came to the Canal Zone in 1942 to work for the 15th Naval District. It was because of his interest that the local squadron came into being.

In February 1949, he wrote the squadron's national headquarters in New Jersey requesting information on how to start one here and how he could be reinstated as a member in good stand-

ing. With the reply from headquarters came material for the piloting course. Incidentally, seven ladies, some of them wives of the charter members-to-be, also passed the course. Since only males can belong to power squadrons, the women organized themselves into the squadronettes, the local unit's auxiliary.

The official anniversary of the Canal Zone Pacific Power Squadron is September 12, the date 20 years ago when the Governing Board of the United States Power Squadrons approved the local charter.

Why Canal Zone Pacific Power Squadron? Everybody was certain that in little time a second squadron would be organized among boating enthusiasts on the Atlantic side. It hasn't happened yet.

The Canal Zone squadron's charter contains the names of Clark, Howard C. Rufus, Brodie Burnham, Walter F. Kindt, Clifford Brewster, Edward D. McIntosh, William H. Clinchard, Walter E. Pearson, William E. Heussler, Bernard J. Brown, Francis S. Hargy, Robert A. Berry, Robert B. McIntosh, Leo E. Barzal, and William J. Neithercoat. The original Canal Zone Squadronettes were Eleanor Burham, Ambruff Pearson, Alida Clark, Hildegard E. Rufus, Eileen Kindt, Ellen Thomas and Lela C. McIntosh.

Clark was the first commander of the Canal Zone squadron. He was last known to reside in Subic Bay, Luzon, Philippine Islands, but nothing has been

heard from him since 1956. Of the founders, only "Bernie" Brown remains active in the Pacific squadron. Hargy, now of St. Petersburg, Fla., and Berry, a resident of Townsend, Mont., still maintain membership in the Canal Zone squadron.

The squadron is planning an anniversary celebration and will promote local observance of Safe Boating Week.

When the Canal Zone Pacific Power Squadron was founded 20 years ago, the parent organization had been active already for more than one third of a century. Started just before World War I in the Boston Yacht Club by Roger Upton, a tenacious, safety-minded boatman, the United States Power Squadrons received much-needed impetus a decade later from a "fortuitous tragedy." During a Boston-to-Halifax sailboat race, a storm dismasted many of the sailing yachts which had to be rescued by the power boats that had tagged along. The episode served to focus interest on power boats, theretofore looked upon with some disdain as "stinkpots" by sailing yachtsmen.

The USPS has grown to a membership of 76,210 boatmen and its 375 squadrons are scattered from Maine to Yokohama and from Alaska to the Canal Zone. The organization is divided into districts, each with several squadrons. The Canal Zone Pacific Power Squadron is in District 50 and has the distinction of being the southernmost unit in USPS.

Membership is by election after the candidate has passed the initial course on piloting, but is restricted to male U.S. citizens. This first course—piloting and small boat handling—is free and open

to anyone interested in boating. More than a million men and women have taken it since the founding of USPS. Despite the inevitable high turnover in local membership—caused by the transitory condition of many Isthmian residents—the Canal Zone squadron now has a roster of 70 squadronites, 20 squadronettes and 2 apprentices (boys 16 and 17 years old who have completed the piloting course but who have to await their 18th birthday before being accepted as members).

Once enrolled, squadronites and squadronettes are eligible for the four advanced courses which are concerned with the general subjects of seamanship, piloting, dead reckoning, and celestial navigation. The courses are free, except for the cost of textbooks and materials and of written examinations. The papers (marked by numbers to conceal the identity of the student) are graded in the United States by professional proctors, as power squadron instructors are called officially.

Each course lasts 12 weeks and classes are held one night a week. For years now, the Canal Zone squadron has used the Panama Canal Training Center in Balboa as its classroom.

By passing these courses, members advance in grade within the squadron—from seaman to advanced pilot, to junior navigator, and finally to navigator. The Canal Zone squadron has two junior navigators in its roster—past commander Brown and John M. Waters. Ten of the squadronites are advanced pilots.

Instructors are volunteers from the squadron membership. They are awarded a coveted merit mark denoting that



Commander Hesch
Raises USPS Ensign

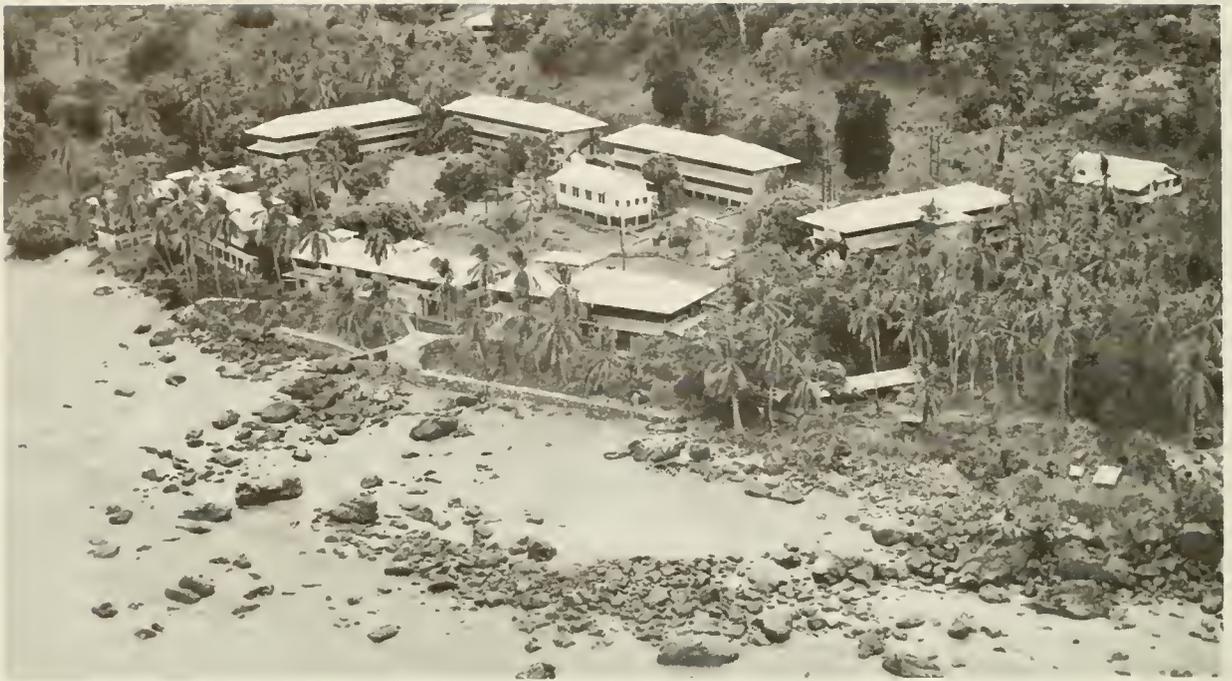
they teach or lecture to newer students.

Only enrolled members are privileged to display the United States Power Squadron's ensign on their craft. The rectangular ensign shows the traditional anchor design surrounded by 13 stars in the left upper quarter, in white and red; the rest of the design consists of blue and white stripes. Boats of the Canal Zone squadronites also fly the Pacific squadron pennant, showing the Southern Cross in white against a field of blue enclosed by red borders. What each symbol means is best explained by the USPS bulletin:

"It is an outward and visible sign that the boat displaying it is under the charge of a capable person who has made a study of piloting and small boat handling and will recognize the rights of others and the traditions of the sea. The squadron's flag marks a craft also as being under the charge of a man who has met certain minimum requirements and is so honored for meeting them. This honor may not be bought or sold, rented, loaned, or given away."

SEAMANSHIP—Power squadron students learn the handling of a sextant from John H. Stevens. From left are: Edward E. Garrett, P. Riggs Forrest, Kenneth E. Lake, Jr. (an apprentice), Stevens, Harry E. Musselman, Jorge Fernández, Robert H. McDaniel, and Betty H. Olchin.





BREEZE-SWEPT—In one of the most picturesque settings in the Canal Zone, Palo Seco nestles in a cove near the entrance to the Panama Canal.

Picturesque Palo Seco Reaches Medical Milestone

By Eunice Richard

A CHAPTER in the medical history of the Panama Canal Zone is quietly coming to a close.

Palo Seco Hospital, established in 1907 at a picturesque cove on the Pacific Ocean west of the Canal entrance, is gradually being phased out and should cease operation by 1972. It is one of four hospitals in the world supported by the U.S. Government for the care of those suffering from Hansen's disease (leprosy). The others are at Carville, La., Hawaii and Puerto Rico.

The closing of the hospital will follow a long-term plan which went into effect in 1965 when the first patients living at Palo Seco were discharged and returned to their communities under a new rehabilitation program sponsored by the Canal Zone Health Bureau in cooperation with Panamanian authorities.

The discharge of more patients from Palo Seco actually became possible as far back as 1945, when the hospital began using the miraculous sulfone drugs developed for treatment of tuber-



GREAT-GRANDFATHER—Still able to read his Bible without glasses is this 83-year-old patient. He has several great-grandchildren living in Panama.

culosis and other infectious diseases. It was first used at Carville for Hansen's disease patients in 1941.

Medieval Times

The sulfone drugs replaced chaulmoogra oil, an ineffectual and vile tasting drug obtained from the Burmese chaulmoogra tree, which had been used since medieval times for the treatment of Hansen's disease. Sulfone, first administered intravenously, was such a great improvement that results could be seen with the naked eye. By 1961, the drug was administered orally in tablet form. With the new treatment, the rehabilitation program was stepped-up.

Before being discharged, the patients are examined by the Hansen's Discharge Board which rules on the question of whether the case is arrested and if there is no further sign of the disease.

Whenever possible, the patient being discharged is given a job, usually in the Canal Zone, and it is made certain by Canal Zone authorities that he can carry out his job with no danger to himself or to others.

All patients discharged from Palo Seco under this program are kept under supervision by the Panama Public Health Service and are given supplies of sulfone tablets to be taken at home to assure against recurrence of the disease.

The possibility of being returned home first came as a surprise and a shock to many of the patients who had come to think of Palo Seco as their permanent home and who must now prepare to accept the outside world.

Not Dreaded

The outside world had to be educated too, to accept the fact that Hansen's disease is not now the dread contagious disease referred to in the Bible, but is, in reality, one of the least communicable of all communicable diseases.

With the present rate of rehabilitation and the continued cooperation of the Panama Public Health Service, it has been possible at Palo Seco to discontinue the use of one three-story dormitory for men and the top floors of two dormitories for women. The patient census, which was 103 in 1965, has been reduced to 71 and soon will go down to 69. Their ages range from 39 to 96.

Home for these patients is a wind-swept quadrangle of nine buildings consisting of living quarters for single patients, each with a room to himself, married patients' apartments, two churches and a building with a kitchen and two dining rooms, one for patients and one for employees. Next door are the administrative office, dental clinic, commissary and storerooms, a hospital to take care of the more seriously ill, and a clinic and treatment room. A laundry, which handles 200 pounds of laundry a day, and a maintenance shop operated by patients, are under the dining room-kitchen building.

Recreation

One of the most important components of the hospital is the recreation building where movies are shown and where patients can hold dances and parties, play pool, and entertain their friends.

Welfare and activities programs have always been of great value, and the movies, furnished free by film distributors in Panama, are shown five nights a week. In recent years there have been such outings as trips to Fort San Lorenzo, sightseeing tours in the Canal

Zone and Panama, picnics at Summit Gardens, trips through Gaillard Cut aboard the Panama Canal sightseeing launch *Las Cruces*, and celebration of Panama's Independence holidays and Christmas.

The staff consists of John R. (Tommy) Thomson, administrative officer; Dr. Guillermo E. Cedeño, who holds an outpatient clinic four mornings a week to treat and check patients' progress, and three registered nurses, Mrs. Marguerite Orr, Mrs. Lucille Wilson, and Mrs. Amelia P. McGroarty, nurse supervisor. In addition, there are nursing assistants, eight kitchen employees, a clerk typist, and Alexander Webster, who is an assistant to Thomson. A consultant service is available at Gorgas Hospital with periodic visits from a dentist, dermatologist, and orthopedic team.

Pleasant Life

Life is pleasant at Palo Seco even for those for whom the new "miracle drugs" came too late and who show the marks of the disease. Some of them are employed as orderlies, waiters, and maintenance men. Others grow fruit and vegetables which they sell to the colony's commissary. Others fish and sell their catch. The patient payroll amounts to approximately \$1,000 bi-weekly. Each patient, in addition, receives a monthly allotment of \$2.50 which he can spend in the Palo Seco Retail Store or draw in cash.

Patients furnish their own clothing, but this is supplemented by gifts from individuals, discarded clothing from the Retail Stores, and unclaimed garments from the Ancon Laundry.

Others make their own recreation such as one old man usually found basking in the morning sunshine reading his



VISITS CLINIC—Dr. Guillermo E. Cedeño, who holds clinics four times each week at Palo Seco, leaves the hospital building after visiting the 30 or more patients who are ill enough to be hospitalized.

Bible. Although he is 83 years old, he reads without glasses.

Or the active young woman who designs and transfers pictures to cloth in yarn and embroidery floss. The work decorates the wall of her bright, cheerful room.

And the middle-aged woman, who is one of those allowed to prepare food in her room. She is never too busy to show off her African violets. The eggshells on the plants? "Oh, they keep away the insects," she explains.



ANNIVERSARIES

(On the basis of total Federal Service)

ADMINISTRATIVE SERVICES DIVISION

Felix L. Wilkins
Platemaker

MARINE BUREAU

James R. Shurland
Motor Launch Operator
V. DelRozario
Helper Lock Operator
George A. Jones
Leader Toolroom Attendant
Sidney J. Tivey
Painter
Ervin D. Moore
Purchasing Agent

TRANSPORTATION AND TERMINALS BUREAU

Adolphus E. Mapp
Helper, Heavy Duty Equipment Mechanic
Webster F. Marshall
Clerk
Percival A. Jordan
Chauffeur
Edgar Signally
Helper General

SUPPLY AND COMMUNITY SERVICE BUREAU

George O. Hayes
Biological Aid
Bernard D. Headley
Assistant Retail Store Department Manager
Kenneth H. Weeks
Stockman
Rupert L. Yard
Motion Picture Projectionist

ENGINEERING AND CONSTRUCTION BUREAU

Leroy A. Cooper
Dispatcher (Floating Equipment)
Jones Benjamin
Lead Foreman, Carpenter
James B. Rodney
Leader Seaman
Walter N. Babb
Navigational Aid Maintenance Man
Philip P. Daniel
Teacher (Elementary L. A. Schools)
Almoda Robinson
Guard

ADMINISTRATIVE SERVICES DIVISION

Edgar L. Josephs
Printing Clerk
Frank A. Venture
Shipment Clerk

OFFICE OF THE COMPTROLLER

Claudius A. Jordan
Bookkeeping Machine Operator
Cecil O. Maughn
Accounts Maintenance Clerk

MARINE BUREAU

Euaska M. Roberts
Wharfbuilder (Maintenance)
William Hall
Leader Carpenter
Edwin D. Milwood
Motor Launch Operator
Darnley G. Rawlins
Oiler
Joseph Foster
Painter

Florencio Santizo
Painter

Henry E. Charles
Rigger (Maintenance)

Andrew E. Watson
Oiler

Angel Maza R.
Helper Shipwright

Burton L. Powell
General Foreman (Salvage and Diving)

William Wirtz, Jr.
Foreman (Marine Woodworking and
Drydocking)

Douglas S. Smith
General Foreman (Locks Operations-Mechanical)

Gabriel C. Adonicam
Oiler (Floating Plant)

Luther Davis
Linehandler

Manuel E. Serrano
Motor Launch Operator

S. A. Brathwaite
Lead Foreman (Operations Lock Wall)

Octaviano Sincler
Painter (Maintenance)

Amos N. Blades
Maintenance Man (Rope and Wire Cable)

Joel W. Donawa
Lead Foreman (Operations Lock Wall)

Evans S. McClain
Linehandler-Deckhand

Ricksford D. Bayley
Seaman

Secundino Arrocha
Helper Lock Operator

Luther Hurley
Asphalt or Cement Worker

Clifford A. Nurse
Teletypist

Darlington L. Bullen
Painter

Alfredo Jemmott
Shipwright (Maintenance)

Lodge W. Waterman
Toolroom Attendant

Matthew M. Kelly
Seaman

Robert J. Blevins
Guard Supervisor

Oliver G. Paterson
Leader Lock Operator-Machinist

TRANSPORTATION AND TERMINALS BUREAU

Eustace A. Holmes
Guard

Joseph B. Greenidge
Helper Automotive Mechanic (Body and Fender)

Culbert E. Daniel
Chauffeur

Ivor A. Reece
Truck Driver (Heavy)

Vicente Nelson
Brakeman

Joseph Drakes
Boiler Tender (High Pressure)

Lucilo H. Hoyte
Supervisory Cargo Checking Assistant

Donald R. Brayton
Railroad Operations Officer

Philmore M. Alexis
Truck Driver (Heavy)

Canon S. Brathwaite
School Bus Driver

SUPPLY AND COMMUNITY SERVICE BUREAU

Marcus A. Grannum
Retail Store Department Manager

Elmer M. Leslie
Laborer

Jose D. Acosta
Laborer

Alfonso Green
Warehouseman (Cold Storage)

Ernesto H. Correa
Supply Clerk

Edward C. Gittens
Warehouseman

G. Clair Lawrence
Chief Foreman Laborer-Cleaner

ENGINEERING AND CONSTRUCTION BUREAU

Rolston G. Harewood
Carpenter

Jeff Danvers
Helper Welder

Lee R. Gittens
Procurement Clerk

David S. Facey
Helper Electronics Mechanic

David A. Mannings
Painter

Edward G. Coyle
Budget Analyst

Donald E. Judson
Power System Dispatcher

Clevlan A. Small
Supply Clerk

William J. Watkins
Stockman

Santiago Graham G.
Helper Electrician

Edward F. Jordan
Helper Ammunition Winder

C. R. Cumberbatch
Seaman

Joseph W. Jordan
Maintenance Man

Edward I. Russell, Jr.
Administrative Assistant

Robert C. Calvit
Inspector (Plumbing)

Edward K. Wilburn
Master, Towboat

Lovestan F. Samuel
Laundry Equipment Repairman

Federico A. Valencia
Engineering Draftsman (Civil)

Stephen R. Gordon
Asphalt or Concrete Mixing Plant Operator

Arcadio M. Matamoros
Pipelayer

George N. Watson
Automotive Equipment Operator

Carlos A. Rias
Laborer (Heavy)

John H. Flynn
Surveying Aid

James U. Samuels
Residual Fuel Treatment Plant Operator

Joseph F. Watson
Electrician (Lineman)

CIVIL AFFAIRS BUREAU

Irvin Clarke
Firefighter

Frederick W. Holmberg
Customs Inspector

HEALTH BUREAU

Hubert E. Thompson
File Clerk

Clifton C. Nolan
Exterminator

CANAL HISTORY

50 Years Ago

THE PANAMA CANAL Mechanical Division was busy 50 years ago rebuilding five former German-flag ships which had been seized during World War I off the South American coast and interned. The first was the steamer *Callao*, formerly the *Sierra Córdoba* of the North German Lloyd Steamship Co. and once one of the best equipped passenger vessels of this company plying between the port cities of Bremen and Buenos Aires.

The vessel was towed from Lima, Peru, to Balboa by the dredge *Culebra* and rebuilt at Balboa by the Canal in 6 months. All five of the ships had been systematically sabotaged by their former German crews. The *Callao* was completed in April 1919.

The new cold storage plant at Mount Hope was used by the Commissary Division for the first time in February 1919. It was one of the finest of its kind in the world, according to the PANAMA CANAL RECORD.

The total number of oceangoing ships using the Panama Canal from August 1914 to May 1, 1919, was 7,632, according to figures printed in the PANAMA CANAL RECORD. The number using the Canal in the month of January 1919 totaled 171 exclusive of U.S. Government and non-oceangoing vessels.

25 Years Ago

A 33 PERCENT increase in the overall food prices in the Canal Zone commissaries since Pearl Harbor was reported at Balboa Heights in April 1944. The report said that food led the advance among all basic living cost items both on the Isthmus and in the United States but that a higher percentage for the Canal Zone was caused by increased handling charges resulting from disruptions in shipping routine by the war.

President Franklin D. Roosevelt sent to the U.S. Senate the nomination of Brig. Gen. Joseph C. M. Mehaffey to be Governor of the Panama Canal. He had served as engineer of maintenance since September 1941 and succeeded Gov. Glen E. Edgerton April 19, 1944. In May 1944, it was announced that Col. Francis K. Newcomer had been appointed engineer of maintenance for the Panama Canal.

Headlight paint, used to keep automobile headlights at a minimum during the years the wartime blackout had been in effect, was being removed from Canal Zone vehicles in April 1944.

Possible reduction in U.S. Navy personnel stationed in Panama and the Caribbean area was voiced in Washington by Vice Adm. F. J. Morne, vice chief of naval operations.

10 Years Ago

WITH THE EXCEPTION of a few isolated pieces of equipment, all household electrical equipment on the Pacific side had been converted by the end of March 1959 from 25-cycle power to 60-cycle operation. The principal remaining users of 25-cycle power on the Pacific side were the locks where conversion was in progress, and Miraflores Filtration Plant, which was scheduled for conversion soon.

Prince Philip, Duke of Edinburgh, arrived in Balboa in April 1959, aboard the Royal Yacht *Britannia*. It was his second visit to the Canal, but the yacht's first call in Isthmian waters and her first transit of the Panama Canal.

Final tests were being made in March on the air-conditioning system in the Administration Building at Balboa Heights. The operation of the new system was initiated on a floor-to-floor basis and the installation of lighting fixtures was being completed.

Bids were being asked by the Panama Canal for replacements for the 50-year-old Panama Canal towing locomotives. It was to be the largest single replacement order ever to be placed for Canal equipment. Also, work was starting on the construction of the bridge over the Panama Canal at Balboa with awarding of a contract for the east approach.



BALBOA FIRE STATION IN 1919—This was the latest in fire fighting equipment as the horse drawn apparatus was discontinued in 1918 with the installation of a hose truck at Gatun. The Canal Zone Fire Department was established in 1905 with one man, a chief.



FIFTY YEARS LATER—The trees are taller, an addition to the station has been added and vast changes are seen in the equipment. In 1956 all fire services were consolidated under one division. Today, Canal Fire Division consists of 12 companies and 152 employees.



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