

MAKE KULA

George Balazs
+ Marc Rice

HONIU HEROES

Sea Turtle Research Program
Turns 20





ON THE COVER: *Honu* heroes George Balazs (left), leader, Marine Turtle Research Program, NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Science Center, and Marc Rice, director, HPA Sea Turtle Research Program, at Kiholo Bay. Photo by Tyson Ferreira.



Staff

Editor
Phyllis Kanekuni, APR

Alumni News
Mary-Alice Kawai Noguès '74

Production Assistant
Deanna Evans

Art Direction + Design
Clifford Cheng > Voice Design

Public Relations Office
Hawai'i Preparatory Academy
65-1692 Kohala Mountain Road
Kamuela, Hawai'i 96743
P: 808.881.4099 • F: 808.881.4003
E-mail: mkk@hpa.edu • www.hpa.edu

[features]

Laurie Ainslie Named New Board Chair	4
Hajime Okuda Retrospective Opens November 10	4
New and Long-Time Employees Honored	5
Dowsett Pool Now Heated by Solar	5
Faculty Profile: Franz "Dick" Solmssen	6
Cover Story: Collaborative Sea Turtle Research Program Turns 20	8
In Memoriam: George Watson	13
Maui Writers Conference	14
Marine Debris Lecture Series at HPA	21

[departments]

Insight	3
Student Voices	12, 14
Academically Speaking	14
HPA 'Ohana Association	18
Service Learning	20
HPA Admissions	22
Coaches Corner	23
Alumni Profile: George Collins '64	24
Ka Makani Days	25
Alumni News	26
From Aunty June's Kitchen	33
On Campus	39



Ma Ke Kula is published three times a year in November, March, and July for students and their families, alumni, faculty, staff, and friends of HPA. Ma Ke Kula reserves the right to select and edit all materials submitted for publication.

The mission of the Hawai'i Preparatory Academy is to provide exceptional learning opportunities and a diverse community honoring the traditions of Hawai'i.

[BOARD OF GOVERNORS]

Laurie T. Ainslie, Chair
Deborah Baker '72
Penny Bradley
Dr. Michael Chun
Putman D. Clark '65

Michael K. Fujimoto '70
Will J. Hancock
Nona F. Hasegawa '78
Charles G. King '64
Duncan MacNaughton '62
Jake J. Mizuno '86

Gregory R. Mooers
Brendan G. Moynahan '66
David W. Pratt
William D. Pratt '86
Michael S. Spalding '66
Donna Tanoue

Roy A. Vitousek III '68
Harry M. von Holt



20

HONU HEROES

COLLABORATIVE SEA TURTLE RESEARCH PROGRAM TURNS 20 BY PHYLLIS KANEKUNI



It is a glorious day at Kiholo Bay. Eight students—five Upper Schoolers and three Middle Schoolers—are busy attending to various tasks at this study site on the Big Island’s leeward coast, just 25 minutes away from the school.

About half of the students are watching a narrow channel in a pristine lagoon for turtles, while the other students work under a large canopy assisting with weighing, measuring, and collecting data on captured turtles under the supervision of George Balazs, leader of the Marine Turtle Research Program within the Protected Species Division of the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service, Pacific Islands Fisheries Science Center, and Marc Rice, director of HPA’s Sea Turtle Research Program.

On this particular day, the students will capture and study 36 turtles—12 new and 24 “recaptures.”

As he works with the students, Balazs explains very carefully the dos and don’ts of working with the turtles. The charismatic and renowned scientist, who has been described as the “*honu*’s best friend,” frequently jokes with the students and exchanges friendly banter with Rice. While the mood is light, there is important work to be done and everyone stays on task.

About 1,500 students have participated in the Collaborative Sea Turtle Research Program at HPA since it began in October 1987. At its helm, are Rice and Balazs—two men who are passionate about their work, the *honu*, and the opportunities the program provides for students to gain real-life field experience as they learn about the threatened animal and share their knowledge with others.

Balazs saw his first sea turtle in 1964 while exploring a lagoon in Bora Bora. In 1969, he watched commercial turtle hunters on Maui land their catch for nearby restaurants catering to Hawai’i tourists. He wondered if there really were enough turtles to sustain the growing trade in turtle steak. He started working with turtles doing captive rearing research in 1971 after earning his master’s degree in animal science from the University of Hawai’i–Manoa. In 1973, his research interests turned to the conservation biology of wild sea turtles in Hawai’i and throughout the Pacific region. For the past 35 years—25 with NOAA—he has pursued an array of studies to aid in understanding and restoring depleted stocks of sea turtles.

The charming and soft-spoken Rice joined HPA’s science department in 1972 and has held numerous teaching and administrative positions

at the school. He holds a master’s degree in marine invertebrate zoology from the University of Hawai’i–Manoa and throughout his tenure at HPA, he has shared his love of the ocean with students. His marine biology course is known throughout the state for its emphasis on fieldwork. Scuba instruction is an integral part of that course and has resulted in a multitude of marine-related projects in the field. He currently leads the Academy’s science and technology group and also is responsible for the development, scope, and hands-on approach of the school’s marine programs. He is an excellent photographer and also holds a United States Coast Guard ocean operators license.

Balazs and Rice obviously “click.” After 20 years, their collaboration has resulted in voluminous work relative to the Hawaiian green turtle (*Chelonia mydas*). The two *honu* heroes clearly share mutual respect and admiration for what the other brings to the program. But Balazs is quick to point out that “without the students, there’s no robustness to what we’ve done.

“The students are budding field technicians; junior scientists who work side-by-side with us and they make it possible for us to do all those things that Marc and I couldn’t possibly do with one other person from my staff. Three of us could do ‘x’ percent in one day. With five, 10 students, we’re able to do 10 times ‘x’ in a day. Students, under Marc’s direction, are the foundation of the program and the magnitude of what we’ve been able to accomplish can be attributed to these well-mannered and thoughtful students.”

Details about how the collaboration came to be vary ever so slightly, depending on whom you ask. For the record, the school’s Sea Turtle Research Program began as an outgrowth of a 1986 field study



Sylvan Waller ‘90 at Kiholo.

OPPOSITE TOP: Marc Rice and George Balazs at the Port of Nagoya Public Aquarium with satellite-tagged juvenile loggerhead turtles. OPPOSITE LEFT: Measuring the curved length of a turtle’s carapace. MIDDLE: George Balazs carefully removes a turtle from the net during an overnight expedition to Kiholo. RIGHT: Jeff Barber, Upper School director of residential life, helps students bring in a turtle during a recent tagging trip to Kiholo.

that included David Gulko, Upper School marine science teacher, Rice (then director of studies), and students Ian McKelvey '87 and Pat Doyle '87. The four accompanied students from the University of Hawai'i–Hilo Marine Options Program and assisted on a tagging trip to Punalu'u, which was supervised by Balazs, who had been working with the college since the early 1980s. When Rice and Gulko approached Balazs about working with high school students in a similar program, Balazs thought Kiholo Bay might be “an excellent place to duplicate what we were doing at Punalu'u.”

HPA already had a close relationship with the Hind family, who owned property at Kiholo. Robbie Hind Jr. initially donated \$2,000 to the school for turtle work there and he and his wife, Florence, continued to support the program until they passed away. The program also has been supported by Dr. Earl Bakken and the Bakken Foundation.

The first turtle tagging trip to Kiholo in October 1987 consisted of 15 students who went on a two-night, three-day field study with Gulko, Rice, and Balazs. The group captured six turtles during that expedition.

Rice recalls the early days of the program (1987-1990), when all trips to Kiholo were overnights and the group used kayaks to transport equipment. Students took a 300-foot net with floats and stretched it across the lagoon at night. While the work might not have appealed to the faint of heart, the experience has been the highlight of many taggers who have been there and done that.

Rice gets animated as he describes the night work. “If there was a turtle in the net, there'd be splashing and the floats would go down and the capture team, five or six designated students, along with an adult, would get the [inner] tube, swim out, get the turtle out of the net, and bring it back. We would keep the turtles safely in a pen and work on them at first light.

“Students rotated duty watching the net throughout the night,” recalls Rice. “Going into that lagoon at night when it's cold and dark and you can't see anything in the water because it's kind of murky...and there are these stickfish that come towards lights and they've got real sharp teeth...the kids would come back and say, “Oh, the most unusual and fun thing I ever did was snorkel at night at Kiholo Bay!”

When Gulko left in 1989, biology teacher Monica Traub took over the program. Traub left in 1991 and Rice, who continued to be involved with the program since the beginning, naturally stepped in to direct the program.

“We had no base population of tagged animals, so the first part was just to tag as many turtles as possible,” explains Rice. A large population of tagged animals would allow researchers to determine growth rates, changes in health status, and migratory behavior, for example, do the animals move up and down the coast or do they stay in the same place. “There were very, very few animals when we started,” says Rice. “We would spend three full days and get seven to 10 animals.”

Since those early expeditions in 1987, the program has expanded to include much of the island of Hawai'i's leeward coast, from Kawaihae to Honaunau. Today, the turtle tagging excursions are primarily day trips, but Rice has increased the number of student trips, from one to three to up to 10 to 20 per year. Students have traveled with Rice to the neighbor islands, Midway Atoll, and Nagoya, Japan to assist Balazs with his work. HPA students also have been the only high school presenters at the prestigious annual International Symposium of Sea Turtle Biology and Conservation, which attracts about 1,000 of the world's top researchers and conservationists to such varied event sites as Texas, Florida, Pennsylvania, and Greece.

In addition to accompanying students on all tagging trips, Rice has traveled with Balazs to French Frigate Shoals, American Samoa, Singapore, and Australia to assist with research work. The program also has become more involved with public outreach, doing presentations at various events such as the Kaloko-Honokohau Culture Day, Waimea Festival, Coral Reef Awareness Day, and Turtle Independence Day.

In 1997, Rice expanded the program to include Middle School students. In 2001, he and a group of Upper School students formed a volunteer sea turtle rescue team for west and north Hawai'i, in partnership with Balazs' Marine Turtle Research Program. Rice still heads the school's rescue team—one of four in the state of Hawai'i, and the only team of high school students. The team responds to reports from the general public of stranded sea turtles in the area from Honokohau Harbor to Pololu Valley. The school's turtle hotline (881-4200) is open from sunrise to sunset; after-hour emergency calls are taken at 987-6903.

As the program has grown, the students' exposure to researchers and scientists working in partnership with Balazs from around the world has grown.

“Now, our students also are involved in actual student research projects,” states Rice. “So that's become much more of a focus on our side.”

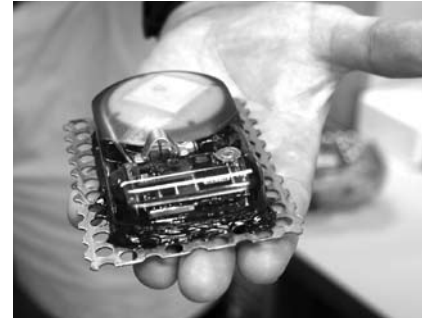
Student projects include the remote video camera at Kiholo and the recent installation of a remote video camera at Puako. The cameras can be operated by students at the school to study basking behavior of green turtles, eliminating the need to wait for periodic visits to the study sites. Middle School student Meimei Nakahara also is involved in a study of gender-dependent growth rates of Sea Life Park captive-bred juvenile green turtles at the Mauna Lani Bay Hotel [see American Girl on p. 11].

Another aspect of the work that has changed is the use of technology. “In the beginning, it was simply a tape measure, calipers, and a scale,” says Rice with a laugh. “We'd measure them and weigh them and that was all we could do, basically.”

Since the mid-1990s, the program has incorporated the use of technology in unique ways. Apart from computers and remote cameras, the program uses telemetry equipment, such as archival time-depth recorders, which are attached to selected turtles to learn about the animals' diel (daily day and night) behavior—their movements, sleeping, and eating habits. The units record the time, depth, temperature, and date of a particular turtle's movements. Each unit costs about \$1,300 and must be retrieved to read the data, which makes it prohibitive to outfit large numbers of animals.

I took part in the first two years of the program. I remember fondly sitting on the point with a search light checking the net every 15 minutes and then, if we saw the splash of a trapped turtle, snorkeling in the cold and black water to retrieve our new friend. Along the way, our splashing would sometimes spook other turtles sleeping on the bottom and they would take off. I remember one time, David Gulko (Marine Biology Teacher from 1986-1989 I believe) caught hold of one and was taken on a wild ride until he received assistance from George Balazs. I smile thinking back to those nights sitting on the beach of Kiholo Bay listening to the waves lap the shore and sleeping out under the stars in a perfect Hawaiian night. I can't believe that was 20 years ago!

Joe Thill '89



TOP LEFT: Kathryn Treacy reviews images taken by the remote video camera at Puako. CENTER: Marc Rice searches the NOAA database for previous capture data. RIGHT: An MK-10 global positioning system and time-depth-recorder.

FAR LEFT: Marc Rice with Kulia Wooddell (left) and Alima Catellacci in Knossos, March 2006. The students were the youngest presenters at the 26th Annual Sea Turtle Symposium in Crete, Greece.

LEFT: L to r: On board the Norwegian Cruise Lines' "Pride of Hawaii" with Linda Balazs and Captain Evans Hoyt. Balazs and Rice released nine satellite-tagged juvenile green turtles from the ship off the coast of Kaua'i on November 4, 2007.

Satellite tags, such as those used on Nagoya loggerhead turtles since the first release in 2003, transmit data to a satellite and turtle movements can be tracked over long periods of time—from a few months to up to two years, or more. One hundred sixty-seven juvenile loggerhead turtles have been satellite-tagged and released since 2003 and 13 turtles from the 2005 release still are transmitting after 908 days. HPA students Kathryn Treacy and Alejandro Horowitz traveled to Nagoya with Rice to assist with the most recent release of 25 turtles in September [See Student Voices on p. 12].

“We’re doing things with technology that very few other folks do,” states Rice. In fact, the Sea Turtle Research Program continues to be the only program of its kind for middle and upper school students.

The collaborative work has yielded major findings about the Hawaiian green turtles. “The most significant finding is that the population is well down the road to recovery,” states Balazs. “Our concern used to be, ‘Can these turtles in Hawai’i survive; can they recover to some level of former abundance?’

“By all means of evaluation right now, they not only have done so, they have done so to the extreme, where a legitimate scientific concern is the foraging areas—Kiholo, the other sites—is the level of food that can be produced by the habitat keeping up with the needs of the turtles?”

Obviously, this is great news for the turtles. “We are deficient as scientists if we don’t fairly and accurately report the good news that goes along with studying a threatened species listed under the Endangered Species Act,” states Balazs. “And over the past several years, we’ve had a lot of good news for Hawaiian green turtles.”

That “good news” translates to a statewide population of about 61,000 Hawaiian green turtles, according to a *ScienceDirect* article Balazs co-authored with Milani Chaloupka (University of Queensland School of Economics), which appeared online on March 13, 2007. While no formal population count has been taken, this figure is based on a computer model that provides the best estimates at this time.

Balazs sees the population growth first-hand every time he visits Kiholo Bay. “We caught six turtles over three days in 1987. Today, we’re

I participated in a number of turtle tagging trips during my time at HPA, including two independent projects in my junior and senior years. The turtle tagging program was a wonderful opportunity and served to inspire and solidify my interest in biology. I decided to pursue science as a career, and am currently finishing up my Ph.D. in biology at Princeton, studying the physiology and behavior of another sea-going reptile: the Galapagos marine iguana.

Maren Vitousek-Bemis '98

there for four or five hours and we’re at 25, 35 turtles and we need to stop. There are so many turtles there that we will overwhelm ourselves with how many we can catch and then adequately, properly handle and collect the data on them.”

According to Balazs, the Hawaiian green turtle population, genetically discreet from others in the Pacific and around the world, is one of, if not the best studied green turtle population in the world. “One of the things to learn is, if our data and impressions are correct, this

An American Girl

HPA eighth grader Meimei Nakahara was featured in the September/October 2007 issue of *American Girl* for her work with threatened Hawaiian green turtles. Nakahara has been working with juvenile green turtles at the Mauna Lani Bay Hotel and Resort over the past year as part of the school’s Cooperative Sea Turtle Research Program under the direction of Marc Rice, director of HPA’s Sea Turtle Research Program, and George Balazs, leader of the Marine Turtle Research Program, NOAA, National Marine Fisheries Service, Pacific Islands Fisheries Science Center.



species in Hawai'i has recovered so very well, almost to the apparent possible detriment of themselves," he says. "That's a wonderful model to study, to figure out what's happened. The population has really built up far sooner than we expected, meaning 30 years or so, and now, they're potentially overabundant in some areas. What is the effect of that on the habitat and how might this be brought into balance? These are intriguing scientific questions."

Another finding, possibly related to the growth in population, is that the turtles' growth rates have declined in many areas compared to what they were back in 1987.

"[The turtles] grow very, very slowly now," states Balazs. "They didn't grow very slowly in the 1980s.

"So when you have less food to go around, it adds fuel to the belief by some of us, that wow, the population has built up really well. That's good, that's great. But it's really built up, maybe, so that it's exceeding the ability of the habitat to support them and that's not quite so good. That's an aspect that needs to be investigated a bit more."

Balazs, who played a major role in getting the honu officially listed as "threatened" under the Endangered Species Act in September 1978, believes that in his lifetime, "it is entirely possible that the special protections of the U.S. Endangered Species Act will be recognized as no longer needed for the genetically-discreet stock of the Hawaiian green turtle."

Should the honu be taken off the U.S. Endangered Species list, Balazs said a different management regime, administered by the state of Hawai'i, rather than a federal agency, will come in and "prudently manage the Hawaiian stock of green turtle so the over harvesting and decline, which occurred in the late 1960s and 1970s, will never again be repeated."

In the meantime, current projects include continuing to sample study sites along the leeward coast. At the time of this interview, Balazs was preparing to travel to Honaunau with Rice. "Each year that we add to our database is one year longer in what already are long-term data sets that are rare in the world of sea turtles for sea turtle foraging sites," he says.

Another ongoing study topic is the basking behavior of turtles, which first appeared in large numbers along the Big Island's leeward coast in the mid-1990s. "We're still struggling with the issues of why they do this," explains Balazs.

From a student perspective, Rice would like to continue getting students involved in conservation issues, not just with green turtles, but the marine environment in general. "Perhaps expanding our scope, continuing to reach out to the community and focusing on some of the environmental aspects and human interactions with turtles because we're going to run into more and more of those issues."

As for the future, Balazs emphatically states, "People make programs. You need to have the right people stepping forward because they will determine what happens in the future. By example, and by history, in some framework, the program will continue.

"Marc is definitely top of the line. It was clear we had common interests, we got along, and we each saw in one another opportunities that we were eager to pursue that would be impossible to pursue, or near impossible, without a partnership. What a match! We needed one another and we enjoyed working together. We marvel and brag about the synergism because the two of us together is more than 1+1=2.

"But, I had no imagination whatsoever that this work would endure and reach the successful levels, scientifically, and from the standpoint of giving students field experience."

Adds Rice, "George has been phenomenal in including us in everything. He's extremely sharing; he's always been very good about explaining things and sharing the science side with us. It's not easy for him as a research scientist to have to work with an educator and high school students.

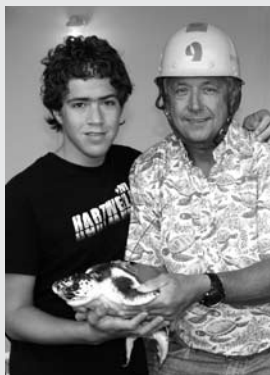
"It's been a wonderful opportunity for HPA and for me, personally, to be able to work with George over the years because he has been a mentor not only to our students, but to me as well." ■

Editor's Note: For more information about the Sea Turtle Research Program at HPA, visit: <http://facstaff.hpa.edu/~mrice/turtle/anniversary.html>

[student] voices

By Alejandro Horowitz

Where can I begin to relate the amazing trip that I took this year to Nagoya Japan? Although it was my second trip, I was as excited as if it were my first. My previous trip the year before had been a life-changing experience that I really wanted to relive. I was looking forward to going back to the beautiful aquarium where we would be working and seeing the friends I had made there the year before, but above all else, I was looking forward to helping with the ongoing marine turtle conservation project. I found out about the trip just a few weeks before it was to take place, but I immediately got my permission slips signed and handed in. I was a bit nervous about missing a whole week of classes, but



CONTINUED ON P. 38

By Kathy Treacy

When the chance to travel to Japan on a turtle-tagging trip came up, I jumped at the offer. This trip offered a unique opportunity to expand our knowledge of both sea turtles and the efforts made to protect them and the chance to have some exposure to a new culture. It was part of an ongoing effort to identify the turtle's migration paths so they can be protected from dangers such as fishing trawlers. My Japanese roommate, Mari, was very enthusiastic when she heard that I was visiting her home. She didn't hesitate to start introducing me to some basic customs and language skills.

Although I was expecting to experience a new language and culture, I wasn't quite



CONTINUED ON P. 38

In Memoriam—George Watson 1943-2007



“Our **students** have ‘ownership’ in this group and they do **amazing** things,”

– George Watson



TOP, l to r:

Installing a new sign about basking turtles with Marc Rice at Punalu'u.

Working with students in the video lab during summer school, July 2007.

Videotaping students' work during a turtle tagging trip to Kiholo Bay, September 2007.

LEFT: With wife Sandi (front), Marc Rice, and Jill Quaintance at Kiholo Bay.

George Watson, who retired from the school last year after 23 years of service, died on October 16, 2007. Known for always putting his students and the school first, Watson had recently returned to HPA to teach the digital media classes while teacher Ari Bernstein (and Watson's former student) was on leave.

Watson served in numerous capacities at the school, but is probably most closely associated with his roles as videography teacher, American Red Cross Youth Group advisor, and Sea Turtle Research Program supporter.

His other roles at the school included CPR Sunday organizer, student activities director, pool manager, work program coordinator, student council advisor, dorm parent, summer swimming program director/instructor, scuba instructor, tennis coach, Village Campus Wilderness Experience Program coordinator, summer school teacher, and superintendent of buildings and grounds.

The Red Cross Youth Group, which was “officially” recognized in 1995 by the American Red Cross, thrived under his direction, with assistance from his wife, Sandi. The annual CPR Sundays hosted by the group certified hundred of local residents in CPR free of charge during the marathon day-long training sessions at Castle Gym.

In 1999, the group was named West Hawai'i School Youth Group of the Year, Hawai'i State Chapter School Youth Group of the Year, and Western Regional School and Community Youth Group of the Year.

In 2000, the American Red Cross named HPA and its Red Cross Youth Group as the National School and Community Youth Group of the Year. Watson and his wife, who also were American Red Cross trained Health and Safety instructors, were named West Hawai'i's American Red Cross Adult Volunteers of the Year in 2000.

The ever-humble Watson always put the spotlight on his students. “Our students have ‘ownership’ in this group and they do amazing things,” he said, after being recognized in 2000. “As advisors, our role has been to provide the technical knowledge and to ‘put on the brakes.’ Our students have a tendency to try to do more than their schedules will allow. Our credo is to do what we can and do it well rather than do a lot, poorly.”

Watson loved the outdoors and often took faculty members and students on camping trips. He documented many of the school activities on video, including the Sea Turtle Research Program, for which he also served as the “logistical support person.”

“He would always take care of getting together all of the food, help pack the trailer with equipment, cook all the meals and oversee the camp site,” recalls Marc Rice, director of the Sea Turtle Research Program. “In the early days, this meant packing equipment for three days of camping—everything from water to port-a-potties. Many of the students’ positive comments about the turtle tagging trips revolved around Mr. Watson’s cooking. In addition, he was very good about making sure that everyone participated in all aspects of the program, from cleaning the dishes to putting away the camping gear.

He was always quiet and in the background, making sure that everything ran smoothly without ever making any fuss about his tremendous contribution to each and every facet of the program. Even in retirement, George continued to participate in the program and his positive attitude was always appreciated. He cared about the students and always encouraged them to get involved and participate.” ■



[Monica Price '88 (left) and Jennifer Mann '88
at Kiholo Bay in 1988.]



Hawai'i Preparatory Academy

65-1692 Kohala Mountain Road
Kamuela, Hawai'i 96743-8476

Change Service Requested

Non-Profit Org.
U.S. Postage
PAID
Honolulu, HI
PERMIT NO. 9434