

**Discover UH 2003  
KITV Script Copy**

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Title:	Discover UH	Writer:	Valerie Elwell
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Video	Audio
OPEN animation	00:15
<p><b>Kathy OC INTRO &amp; TEZ</b> Location:</p> <p><b>Kathy gestures toward a building</b></p> <p><b>B-roll :</b> Sid's choice.</p> <p><b>Kathy OC</b></p> <p><b>NOTE:</b> <b>3 diff. Tapes for mummies</b> 1:48 int w/ Littman &amp; miller 23:11 stills 8:39 video b-roll</p>	<p>00:45</p> <p>Hi, I'm Kathy Muneno and welcome to "<b><i>Discover UH.</i></b>" As a past graduate of the university, it's an honor for me to host a program that showcases the many amazing contributions that the University of Hawaii makes in our state and in the global community.</p> <p>The University is more than a collection of buildings...of classrooms and laboratories and libraries. It's really a collection of people---the teachers, students and researchers ---who bring their passion for learning and transform it into new ideas and exciting discoveries.</p> <p>Join us as we "Discover UH" through the stories of these remarkable people and the work that they do.</p> <p>First up, is the story of two researchers, who are introducing the <u>ancient</u> mummies of Egypt to the <u>ultra modern</u> technology of the Cat scan, in a study that promises to be the most significant research on mummies in the last 50 years.</p>

<p><b>Segment #1: Mummies</b></p> <p><b>KATHY V/O</b>  <b>Cut 8:48:00-:30</b> WS of Bahariya plain  <b>Cut 8:54:23-:39</b> Miller w/Egyptians at tomb entrance  <b>Cut 8:44:40-:55</b> Pan of family group of mummies  <b>Cut 23:11:44</b> Still small mummy  <b>Cut 23:13:18</b> Still mummy w/face  <b>Cut 23:13:34</b> Still-mummy #9</p> <p><b>Cut 8:51:35-55</b> Miller &amp; Littman on Bahariya plain</p> <p>Cat scanner from new stills or capture photo from Siemens site?</p> <p><b>Mummies Int. tape- 1:53:20-1:54:19</b>  <b>Miller OC</b>  Key Miller</p> <p><b>Cut 23:20:24</b> StillCU ancient man model  <b>Cut 23:20:24</b> Still CU little girl model</p> <p><b>Kathy V/O</b></p> <p>Catscan photos TBA</p> <p><b>Cut 23:14:24</b> Littman/Miller viewing mummy sarcophagus</p>	<p><b>4:45</b></p> <p>About 260 miles southwest of Cairo, Egypt, near the Bahariya oasis, lie the recently discovered tombs of nearly 10,000 mummies. They represent a span of almost 600 years, from 300 B.C. to 300 A.D. And, unlike the royal tombs of the Pyramids, these mummies are from all walks of life...rich, poor and middle-class. :21</p> <p>This is where UH researchers, Dr. DeWolfe Miller, an expert in epidemics and infectious disease, and Dr. Robert Littman, an expert in ancient medicine, have begun their <b><i>Egyptian Mummy Project</i></b>. Their plan is to use a portable Cat scanner to examine thousands of mummies and answer questions about health and disease in a pre-modern population. :18</p> <p><i>“The idea of looking at diseases in antiquity has undergone an evolution... progression from dissection to xray to catscan...3D model of what you’re xraying...clearly non-invasive...info you can collect is really remarkable.” (:59)</i></p> <p>The Cat scanner will provide a detailed picture of the body, including the skeletal system, without disturbing the mummy’s wrappings. Computers will allow the scientists to twist and turn the images to study them from any angle. The information will give them clues to the cause of death and disease processes. It will also give them insights into other aspects of ancient life like their food supply, diet, social life &amp; religion. :20</p> <p>Initially, the project was expected to last only three years, but when Littman &amp; Miller began their preliminary survey,</p>
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<p><b>Cut 23:27:15</b> Still Miller w/ Zahe Alwaz</p> <p><b>Mummies int. tape- 1:56:05-1:57:01</b> Littman OC Key Littman</p> <p>VIDEO?????</p> <p><b>Mummies int. tape 1:59:28-1:59:48</b> Miller OC</p> <p><b>Cut 23:18:59</b> 3 mummies in row</p> <p><b>Kathy V/O</b> <b>Cut 23:19:32</b> Egyptian w/magnifier looking at mummy <b>Cut 23:19:50</b> CU mummy with rock under head</p>	<p>the Egyptian Supreme Council of Antiquities was so inspired by their plan, they were asked to increase it to ten years. :11</p> <p><i>“At that point, we did not have machine ....Miller asked for ½ mil dollars...I contacted Siemens ...be sponsor...brand new machine...ship to Cairo...operating funds... .....100,000 dollars in kind maintenance. (:56)</i></p> <p><i>So, really, this is really the next big step...actually two big steps...getting instrument in place...and actually getting protocol for getting mummy from tomb to ct...with no damage to anybody. (:20)</i></p> <p>And, preventing damage to the mummies is of paramount concern to everyone involved. Miller &amp; Littman plan to use ER techniques and a special apparatus to hold the mummy’s head to make transport safer and more efficient. :10</p>
<p><b>Mummies int. tape 2:07:49-2:08:30</b> Littman OC <b>Cut 23:15:24</b> Still 2 mummies/faces side by side <b>Cut 23:26:22</b> Still of mummy w/sarco <b>Cut 23;18:10</b> Still sandy entrance to 2 tombs <b>Kathy V/O</b> <b>Cut 8:56:12-59</b> Miller down in tomb walks through, comes up other side</p>	<p><i>“After all these are real people, these are their remains...we ought to respect the dead, their burial...with using the catscan is it’s non invasive...they go right back to their tombs.”:41</i></p> <p>With funding from National Geographic, the <b><i>Egyptian Mummy Project</i></b> is attracting plenty of attention. But, the researchers are more concerned with sharing it with their students back at UH. :08</p>
<p><b>Mummies int. tape- 2:05:32-:53</b> Miller OC until end.</p>	<p><i>“I’m anxious to bring this to the classroom ...stimulate..enthrall with development of science...how discovery really drives our institution and how wonderful that is.” :21</i></p>

<p><b>Kathy OC Transition-NASA LAB</b></p>	<p><b>00:11</b>  From the mysteries of the ancient world to the mysteries of space, UH is at the forefront of discovery. Our next story focuses on a unique lab whose goal is to inspire students towards careers in space and aeronautics. :11</p>
<p><b>Segment #2: NASA Lab</b>  <b>Kathy V/O</b>  *WS of WCC sign (from news?)  <b>Cut Nasa lab tape 1:02:55-1:03:00</b>  Nasa Aerospace sign</p> <p><b>Cut Nasa lab tape 1:03:46-1:04:00</b>  WS pan of students, computers, sim &amp; Jake helping student</p> <p><b>Cut 1:19:50-:56</b> wind tunnel pan right</p> <p><b>Cut 1:18:03-10</b> Shuttle model pan down to sim/outside view shuttle crash.</p> <p><b>Cut 1:09:35:43</b> 2-shot Jake demonstrate joystick to student</p> <p><b>Nasa Lab tape-Jake int.1:23:12-:48</b>  <b>Jake OC</b> then cut at “ciotti” to shots from imaginarium &amp; exploration lab vignettes w/o audio</p> <p><b>Kathy V/O</b>  <b>Video: 1:04:24-34</b> Jake observ. stud at sim/other student in cubby</p> <p><b>NASA Lab tape 1:24:20-56</b>  <b>Jake OC</b> halfway in cut to  1:21:40-48 WS Jake/computer/tunnel</p> <p>Cut 1:21:00-29 CU Jak/comp/zoom right</p>	<p><b>02:30</b></p> <p>NASA and Windward Community College have collaborated to build the <b><u>NASA Flight Training Aerospace Education Laboratory .</u></b></p> <p>The lab can accommodate 24 students at a time. It’s equipped with computers used for learning concepts like airplane design, robotics and living in space.</p> <p>It also boasts a laboratory grade wind tunnel used for testing wind dynamics and wing design concepts.</p> <p>And in the virtual reality flight simulator, students get a chance to take off, fly and land the space shuttle.</p> <p>Physics professor and lab coordinator, Dr. Jacob Hudson, explains its importance to Windward Community College. : 32</p> <p><i>IN: I feel it’s important...complete pkg. Ciotti..imaginarium...exploration...</i>  <i>OUT: ...acts as seed for future interest. :36</i></p> <p>The lab is one of only 25 in the nation and NASA is a partner in every aspect. :05</p> <p><i>IN: They brought equipment in, set I up, fix any problems...update...upgrade... constantly changing...OUT: ...taking very good role...outreach part of that.” (:36)</i></p>

<p>tunnel working  <b>Kathy V/O</b></p> <p><i>NASA lab tape 1:26:38-1:27:04</i>  <b>JAKE OC</b>  <b>Cut 1:09:00-17</b> crash at simulator,  laughter</p> <p><i>NASA lab tape 1:27:08-21</i>  <b>Jake OC to end</b></p>	<p>So, what's the long-term goal for the lab? :02</p> <p><i>IN: "NASA firmly believes and so do I that interest in space happens at early age...Ignore gravity...crash simulator...  OUT:...nothing earth shattering about it. :26</i></p> <p><i>IN: the idea is...10-15 years..shuttle pilot  OUT: "...got interested at that aerospace lab I went to." :13</i></p>
<p><b>BREAK # 1</b></p>	
<p><b>Welcome Back &amp; Intro Bug Free Flowers</b>  <b>Kathy OC</b></p>	<p><b>00:10</b></p> <p>Welcome back to "<b>Discover UH</b>". Bugs...and how to get rid of them... have plagued the tropical flower industry in Hawaii for decades. Next up are two researchers who devised an effective solution to the problem.</p>
<p><b>Segment #3: Bug Free Flowers</b></p> <p><b>Kathy V/O</b>  <b>Bug Free tape 1:14:43-:54</b> Low angle ws of green/red anth. with delivery van/worker-bkgrd.</p> <p><b>Cut 1:04:53-1:05:03</b> Worker sorting flowers</p> <p><b>Cut 1:10:40-:50</b> Side view worker face pan down to scrub; remove from sink</p> <p><i>Need extra video per Tim in Hilo of professors together, looking at bugs, cu of diff bugs.</i></p> <p><b>Cut 1:07:27-56</b> pink ginger in basket/bugs floating on top</p>	<p><b>3:20</b></p> <p>Cut flowers are currently a 17 million dollar industry in Hawaii, but shippers have long struggled with meeting quarantine restrictions because of the insects that love to live on the flowers.:08</p> <p>In the past, the flowers had to be hand scrubbed in soapy water and then carefully rinsed. It was labor intensive and not very effective at eliminating the pests. :07</p> <p>Professor Alan Hara, a UH-Manoa entomologist and Professor Marcel Tsang, an agricultural engineer from UH-Hilo, discovered that soaking the flowers in hot water kills the bugs without damaging the flowers. Dr. Hara</p>

<p><b>Bug Free tape-Hara int 1:17:24-1:18:20</b>  <b>Hara OC</b> until “109 degrees” then  <b>Cut 1:04:34-52</b> Worker dollying flowers  <b>Cut 1:01:04-1:02:00</b> process all the way to hot water basket  <b>Cut 1:07:57-1:08:26</b> CU worker hand on controller pushing button, lifts basket from hot water moves to cold  <b>Cut 1:09:50-58</b> hand scrubbing stem  <b>Kathy V/O</b>  <b>Cut 1:06:33-:55</b> Low angle view of flowers soaking in tub</p> <p><b>Bug free tape 1:19:20-52</b>  <b>Hara OC</b>  <b>Cut 1:07:04-25</b> Above shot-flowers soaking  TBA-use anything from new footage???</p> <p><b>Kathy V/O</b>  <b>Cut 1:14:55-1:15:08</b> Male worker unloading van</p> <p><b>Bug Free Tape-Hara 1:20:00-20</b>  <b>Hara OC</b> whole quote</p> <p><b>Kathy V/O</b></p> <p><b>Bug Free Tape Tsang int. 1:27:19-50</b>  <b>Tsang OC</b>  <b>Cut 1:11:23-1:12:10</b> CU controller, hand grabs, zoom out to basket lifting from tub, lowers to ground...ends with flowers in basket</p> <p><b>Kathy V/O</b>  <b>Cut 1:14:00-:05</b> WS greenery/pan right to workers at table  <b>Cut 1:16:12-:30</b> Low angle pan of anthuriums</p>	<p>describes the process. :13</p> <p><i>“First the flowers are brought in from the farm...bins...pre-conditioning chamber 109 deg. –2 hrs...basket....hot water dip tank for 12 minutes (120 deg.) then immersed in cold water 6 minutes...brief handwash to remove bugs. ..then ready for packing.” :56</i></p> <p>It took a lot of experimenting to come up with the optimal time and temperature.”  03</p> <p><i>“We did tests from 115 F to 124F at diff times from 5 to 20 minutes...And looked at how flowers tolerated heat and what it took to kill the bugs .... We came up with the 120 at 12 minutes for insects that infest these flowers.” :32</i></p> <p>The next step was getting the flower shippers interested in their new system.  :03</p> <p><i>“For shippers, they wanted a system that is practical....we showed them cattle trough, instant water heater, not expensive... readily available here in Hilo.” (:20)</i></p> <p>Dr.Tsang had this to add. :01</p> <p><i>“It’s certainly a very portable system...need power, hot water is gas heater....brought to any place we want it to be brought.” :31</i></p> <p>The positive response by flower shippers is the most rewarding aspect of creating the system. (:04 )</p>
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<p><b>Bug Free Tape-Hara 1:23:40-1:24:01</b>  <b>Hara OC</b> until “labor-saving” then <b>cut to 1:12:22-:44</b> Worker removing flowers from basket puts in can  <b>Cut back to Hara OC to close</b></p>	<p><i>“They all find it economical and labor saving. And it’s been (stuttering-EDIT OUT)) recognized by USDA and California and therefore it’s really streamlined their shipments...not dealing with shipments that are infested with live bugs.” (:21)</i></p>
<p><b>Kathy OC</b>  Transition to Mushroom Man</p>	<p><b>00:10</b>  Our next story focuses on an award-winning educator who’s been recognized for his enthusiastic teaching style and his expertise in the study of mushrooms.</p>
<p><b>Segment #4: Mushroom Man</b></p> <p><b>Kathy V/O</b>  Hemmes tape- <b>2:09:35-2:10:06</b> Sideview drawers/hemmes takes out <b>mushrooms</b> (after “cell biology” <b>cut to 2:02:12-:28</b> UH Hilo sign/bicycles</p> <p><b>Cut 2:04:55-2:05:05</b> Hemmes pulls up mushr./sniffs/pulls another</p> <p><i>Don Hemmes int. 2:20:35-2:21:50</i>  <b>Hemmes OC</b> until “clusters” then <b>cut 2:07:25-45</b> Don picking/sniffing mushr. <b>2:08:45-2:09:05</b> CU mushr. in his hand</p> <p>At “took all my photos” <b>Cut</b> in 2-3 mushroom slides  At “formed partnership” back to <b>Hemmes OC</b></p> <p><b>Kathy V/O</b>  <b>Cut 2:12:03-:56</b> CU book, slides, dusts slides</p> <p><i>Don Hemmes int. 2:16:25-2:17:05</i>  <b>Hemmes OC</b></p> <p>At ½ way pt. <b>Cut</b> in rest of mushroom slides</p>	<p><b>02:42</b></p> <p>Professor Don Hemmes, a teacher of general botany and cell biology at UH-Hilo, is known around campus as the “Mushroom Man”. He’s the resident expert on Hawaii’s mushrooms and is called on statewide to identify them in suspected poisonings. His fascination with fungi has been longstanding. :15</p> <p><i>“Well, here I’m the one micologist...I’m an educator...see clusters of mushrooms...are they edible or poisonous...realized there was not a field guide. Gold mine...took all my photos to nat’l mtg. To get a mushroom expert to help...Dennis DesJardin...formed partnership, NSF funding for 7 years and so that’s how it started.” (1:15)</i></p> <p>The recent publication of his book, “<b>A Field Guide to Mushrooms in Hawaii</b>” is the culmination of their research and it’s yielded some exciting results. :07</p> <p><i>“Well so far we’ve done classif. of 300-400 mushrooms....if go to native forests...9 of 10 are unique to Hawaii...endemic and found only in Hawaii...100 species...named 55 as new in past few years.” (:40)</i></p>

<p><b>Kathy V/O</b>  <i>Cut 2:13:48-:58 MS Hemmes at microscope looking at big mushroom</i></p> <p><i>Cut 2:14:28-:38 CU big mushroom</i>  <i>Don Hemmes int. 2:25:00-22</i>  <b>Hemmes OC to end</b></p>	<p>Professor Hemmes has great hopes for the future of Hawaii's fungi. :03</p> <p><i>“There’s always the aspect that these fungi could produce antibiotics, pharmeruticals, cancer cures...extract these diff. types of pharmeruticals...called mico-prospecting ...important products. (:22)</i></p>
<p><b>BREAK #2</b></p>	
<p><b>Kathy OC- Welcome back &amp; Intro Seg. #5</b></p>	<p><b>00:10</b>  Welcome back to <b>“Discover UH”</b>. The federal government has a serious shortage of people that can speak languages critical to our national security. Our next educators are helping bridge that language gap.</p>
<p><b>Segment #5:  Korean Flagship Program</b></p> <p><b>Kathy V/O</b>  ***Korean Language bldg- news footage?  ***Can we capture graphic from NSEP website?  <b>Cut to 4:58:00-:10</b> Prof w/ 4 students at classroom table talking</p> <p><b>Cut 5:11:20-:42</b> Hill brings down book and he &amp; Greg discuss in Korean</p> <p><b>Korean tape- 5:27:11-:27</b>  <b>Hill OC-</b> at ½ way  <b>Cut 5:12:22-:50</b> Reverse of above Greg speaking korean</p>	<p><b>01:56</b></p> <p>The University of Hawaii recently received a grant for over one million dollars from the <i>National Security Education Program</i>. The grant will fund a 3-year pilot project called the <b>UH Korean Flagship Program</b>.</p> <p>Its purpose is to give students a high level of professional competence in the Korean language that will then qualify them for specialized Federal jobs.</p> <p>Charles Hill, Office Manager for the program, explains further. :25</p> <p><i>“In the Korean language, we wish for each Flagship student to become fluent in Korean language...fluent in the prof'l area of expertise.” :16</i></p>



<p><b>Kathy V/O</b> Cut 5:20:48-5:21:12 Youngku walking w/Dorothy &amp; Jacob</p> <p><b>Korean tape- Kim int. Cut 5:16:42-:52</b> <b>Kim OC</b> throughout</p> <p><b>Kathy V/O</b> Cut 5:14:07-:20 CU computer screen, zoom out to Charles &amp; Greg discussing</p> <p>Korean tape-Hill int <b>Cut 5:29:12-31</b> <b>Hill OC</b> throughout</p> <p><b>Kathy V/O</b> Cut 4:58:45-59 CU prof. face/zoom out to see students laughing (hear also) Cut 5:06:00-10 CU worksheet/hand marking w/pen, zoom out arms</p> <p>Kim int. <b>5:18:08-:20</b> <b>Youngku Kim OC</b> ½ way in Cut to Pam’s Mixed Plate Korea- video of Korea Univ.</p> <p>Cut 5:00:00-15 Dorothy reading Korean, slow zoom out, she looks up when done</p> <p>Cut Dorothy int. <b>5:25:56-5:26:10</b> <b>Dorothy OC</b> <b>Key:</b> Dorothy Stimkey (sp?), B.A. art history, M.A., Public Admin.</p>	<p>Acting Director, Professor Youngku Kim, says there will be a variety of fields represented. :04</p> <p><i>“Right now we have 2 tracks, one is political science and business and we’re expecting to recruit more students in a variety of fields that are critical to nat’l security.” :10</i></p> <p>Student funding comes from the Academy for Educational Development, a non-profit organization. :04</p> <p><i>“The fully funded students...make commitment to govt....3 of following 5 years to US govt in an area involving Korean language.” :19</i></p> <p>Currently, there are 12 students enrolled in the two-year program. The first year is spent on Korean studies at UH. The second year is spent in Seoul, Korea. :07</p> <p><i>“So students will be taking classes at Korean Univ. and we are working to arrange customized internships for students so they will be able to do internships at workplaces of their own choice.” :12</i></p> <p>Of course, the success of the program hinges on its students. Student Dorothy Stimkey expressed her goal for the future. :05</p> <p><i>“I believe that in my lifetime...south &amp; north will reunify...learning language really well...allow me to play a significant role.”:14</i></p>
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<p><b>Kathy OC Intro Seg. 6</b>  Two diff tapes:  Kina experiment 1:00 tcr  Nachtigall/supin int/dolphins/boats  3:00 tcr</p>	<p><b>00:10</b>  Our final story takes us to Coconut Island, where researchers are testing the hearing and echolocation skills of whales and dolphins to discover how much noise in the ocean is <u>too</u> much.</p>
<p><b>Segment #6: Echolocation</b></p> <p><b>Kathy V/O</b>  Navy ship in ocean-news footage?  <b>Cut 3:12:27-3:13:52</b> BJ swimming  <b>Cut 3:14:37-:50</b> Boris swimming-side  <b>Cut 1:26:04-15</b> CU Kina head-swim</p> <p><b>Cut 1:46:12-:20</b> P &amp; S in shack pointing at monitors talking</p> <p><b>Cut 1:40:31-:57</b> P &amp; S in shack window, Dara whistles, Kina comes</p> <p><b>Nachtigall tape 3:07:44-56</b>  <b>Paul OC</b></p> <p><b>KATHY V/O</b>  <b>Cut 1:54:55-1:55:00</b> Sasha looking at monitor</p> <p>Nachtigall tape 3:03:04-44  <b>Supin OC</b></p> <p><b>Cut 1:28:00-:20</b> WS P &amp; S &amp; others setting up for experiment</p>	<p><b>04:15</b></p> <p>Today's oceans are increasingly filled with noise originating from earthquakes, ships and other sources. But despite concern expressed by several groups, little is known about the effects of noise on sea creatures. :10</p> <p>Paul Nachtigall, Director of the <b><i>Hawaii Institute of Marine Biology</i></b> and his Russian colleague, Alexander Supin, of the <b><i>Russian Academy of Sciences</i></b>, are measuring how factors like noise frequency, intensity and duration affects whales and dolphins. :13</p> <p><i>“We, as humans, put a lot sound in the ocean it does have detrimental effects on animals and some of our work has to do with studying hearing and the effects that loud noises have on animals.” :12</i></p> <p>Dr. Supin works with bottlenose dolphins in the Black Sea and is currently on his sixth visit here. :04</p> <p><i>“Actually, the research done at our marine research station are very close to what is done right here, so why I am here, b/c here I have a unique opportunity to combine some skills of famous animal psychologists and bio-aquaticians with some of my skills as a physiologist. So in the field of scientific cooperation, 1 + 1 is much more than 2.” :40</i></p>

<p><b>Kathy V/O</b>  <b>Cut 1:36:26-:50</b> Kina resting in hoop, whistle, goes to Dara</p> <p><b>Nachtigall tape 3:01:35-3:02:04</b>  <b>Cut 1:42:10-15</b> Paul in shack looking down at Kina</p> <p><b>Nachtigall tape 3:02:07-:21</b>  <b>Paul OC</b></p> <p><b>Kathy V/O</b>  Kina jumping ter_____</p> <p><b>Cut 1:43:58-1:44:08</b> Kina swimming, surfaces, see eye, etc.</p> <p><b>Nachtigall tape 3:06:22-:41</b>  <b>Paul OC</b></p> <p><b>Cut 1:24:50-1:25:20</b> CU Kina resting head near dock (eye opens 1:25:04), head out, looks at camera both sides, swims away</p> <p><b>Nachtigall tape 3:06:50-:58</b>  <b>Supin OC</b></p> <p><b>Kathy V/O</b>  <b>Cut 1:25:55-1:26:01</b> MS Kina looking at camera, full body</p>	<p>Hearing is normally tested in small whales and dolphins by training them to listen and report sounds that they hear. And their echolocation ability is closely linked to their hearing. :09</p> <p><i>“Echolocation is very basic sensory process....front of heads...bounce off fish...allows catch fish...find your food if you’re a dolphin or whale.” :28</i></p> <p><i>“Well, echolocation is a really fascinating sensory modality b/c great deal of interaction between hearing process and ability to echolocate. So, we study hearing &amp; echolocation simultaneously.” :14</i></p> <p>Their primary test subject is a false killer whale named Kina. She’s 25 years old and weighs just over 1,000 pounds. Kina came to the institute in 1993, after she lost her job when the naval research program closed down. :13</p> <p>False killer whales are normally all black, so we asked the researchers about the white coloring on Kina’s dorsal area :06</p> <p><i>Paul: “We’ve added that. (laugh) She sits here in the nice HI sun and like us, we need protection from UV...she does as well and on a nice sunny day we put that sunscreen on her to protect her...it’s Desitin ointment....we put the sunscreen on here to protect her from the harsh rays of the sun.” :19</i></p> <p><i>Supin: “And, in addition, maybe I can add, ahh, any female must have some makeup” (laughter) :08</i></p> <p>Dr. Nachtigall explains the process for testing Kina’s hearing. :03</p>
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<p><b>Nachtigall tape 3:09:00-3:09:42</b>  <b>Paul V/O</b>  <b>Cut 1:30:35-:40</b> Kina coming over  <b>Cut 1:29:42-1:30:05</b> Dara putting gel on sensor  <b>Cut 1:31:23-:43</b> Dara putting sensors on Kina</p> <p><b>Cut 1:38:57-1:39:53</b> WS Dara, P &amp; S in shack looking on</p> <p><b>Cut 1:50:48-1:51:03</b> Super CU of brainwave monitor, movement  <b>Cut back to 1:38:57</b> at end where Kina comes out of hoop.</p> <p><b>Kathy V/O</b>  <b>Cut 3:15:25-:48</b> Paul CU sideview walking &amp; talking on dock</p> <p><b>Nachtigall tape 3:07:56-3:08:20</b>  <b>Cut 3:11:51-3:12:22</b> BJ the dolphin 4 jumps</p> <p><b>Nachtigall OC 10 secs.</b></p> <p><b>Cut 1:25:36-:49</b> Kina CU head, see eye swims away</p>	<p><i>“What happens is Kina comes in and she wears little suction cups. Inside the suction cups are human EEG sensors, the same kind that if you went to Dr. you’d have the same gold sensors. And she wears one over her head, over her brain and one on her back and we play a sound and the EEG sensor pick up the brainwave patterns of her brain in response to those sounds. If we play a good size sound...she gives a big response on her brainwave pattern, if we play a very quiet sound, she gives us a little response. So, we can very rapidly measure her hearing by looking at her brainwave response.” :42</i></p> <p>Nachtigall is currently working with the National Ocean and Atmospheric Administration, and other government agencies, to establish regulations limiting the amount of sounds in the ocean. :09</p> <p><i>“And we don’t think we can stop people putting loud sounds in the oceans...but we think we be able to understand hearing better to look at some sort of limit so we’ll no how much is too much and how much is allowed...so we’ll be able to provide real quantitative numbers to people, to say that if you put this much sound in the ocean than that’s ok but if you put more you do it at your own risk.” :24</i></p>
<p><b>BREAK #3</b></p>	
<p><b>Kathy OC</b>  Wrap-up and goodbye</p> <p>Location??????</p>	<p><b>00:30</b></p> <p>The university is one of Hawaii’s most vital assets. We hope that <b>“Discover UH”</b> has given you some idea of the amazing collection of programs and people that have earned the University of Hawaii national and international attention.</p>

	<p>Passion, curiosity and incredibly hard work are the common ingredients to these success stories. And these are stories that need to be told, especially to our young people, because they can be the road map to a bright and exciting future for Hawaii...a future filled with endless possibilities.</p> <p>I'm Kathy Muneno. Thanks for watching.</p>
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