

*Animal Training and Research,
International
&
SLEWTHS Project
Science, Learning, and Exploration
With the Help of Sea lions*

**END OF THE YEAR SUMMARY
2005**

*Animal Training
&
Research International*



Research

Helicobacter study:

In 2005 the Helicobacter study, now centered at MIT, advanced forward significantly in the isolation of one further isolate of the pinniped strain. However, this still leaves one remaining isolate necessary for naming the bacterium.

Meanwhile our colleagues at UC Davis submitted a proposal to continue the histopathological investigation, which was unfortunately not funded. Dr. Hurley and Dr. Harper began work on two publications summarizing our work thus far: on the identification of the novel bacterium and on the epidemiology of the spread of the disease in wild populations of pinnipeds.

Camera development:

Nikki Dinsmore, an undergraduate at CSUMB, picked up where Allison Reesh left off with the development of the integrated camera/depth readout on our sea lion underwater camera system. Working with Steve Moore, a professor at CSUMB, Nikki expanded the depth sampling rate to 3 times/sec, to more accurately reflect the rapid ascent and descent rates of our animals. She also added a zero mechanism to calibrate the device to the water surface and successfully presented and defended her capstone project. We hope to use the newly modified camera in future open ocean investigations in 2006.

Molting Dynamics:

Data collection continued throughout 2005 to study the molting patterns and dynamics of the California sea lion. Heather Yeager finished collecting data for her capstone project, and passed the data collection on to Nancy Wenkel. Nancy has continued to sample monthly each of the 4 initial animals in the study and training is underway to add our two newest and youngest animals into the study in early 2006.

We will continue to photograph and collect shed hairs from now a collection of 3 males and 3 females for years to come in order to watch the development of molting and the affect of season, water and air temperatures, and body condition.

Growth and morphometrics:

With the addition this year of two new juvenile sea lions (Cali and Ariel) to our collection, we immediately worked hard to train the youngsters to cooperate in routine weight and length measurements. After several months both animals successfully began participating in this regular monitoring which, coupled with on-going, long term morphometrics data collection on our juvenile male sea lions will be a long term study on growth dynamics in California sea lions, contrasting male and female development.

Publications, Presentations, Proposals and Permits (P⁴)

Publications

-The staff as a whole wrote and published two volumes of our *Inspiring Minds* Newsletter (5/05 and 12/05).

-We created a 50pg Standard Operating Procedures Manual for our procedures at our remote facility, Sea Lion Encounters.

-Amber Stephens and Dr. Hurley wrote a brief paper on blood sampling with California sea lions for the IMATA Winter 05 *Soundings Newsletter*.

-Dr. Hurley began work on an epidemiological paper to be submitted to *Diseases of Aquatic Organisms Journal* entitled "Evaluating the prevalence and treatment of a novel *Helicobacter* species in pinnipeds."

Presentations and conference participation

- Dr. Hurley was honored to be asked to be a keynote speaker at the CSUMB State of the University and Community Day of Learning event Jan 20. She presented a one hour multi-media talk on the educational programs of SLEWTHS and CSUMB student involvement.
- Allison Reesh, Kristi Leikvoll, Jamie Mullins, Chelsea Williams, and Nancy Wenkel went to the regional International Marine Animal Trainers Association (IMATA) meeting hosted by the US Navy's marine mammal program in San Diego March 4-6.
- Jenifer Hurley, Stefani Skrovan, Gina Paolini and Jennifer Gale attended the 5th annual Animal Behavior Management Alliance meeting April 10-15.

Jenifer Hurley presented a workshop on training ABC's at the request of the board of directors and sat on a panel discussion on the subject of animal separation training.

Stefani Skrovan made a formal presentation entitled "Training California sea lions to operate in remote and challenging environments"

Jenifer Hurley was a co-author with Dave Lichman on a formal presentation entitled "Parelli Natural Horsemanship, using species specific traits to enhance behavior modification". *This presentation won the conference award for "Sharing the Knowledge"*.

- Jenifer Hurley, Stefani Skrovan, Jackie Rifkin, and Jamie Mullins attended the annual IMATA meeting hosted by the Dolphin Connection in FL Nov 6-11.

Stefani Skrovan made a formal presentation entitled "Training California sea lions to operate in remote and challenging environments"

-Jackie Rifkin successfully presented and defended her capstone thesis on writing a children's book entitled "The fabulous Life of Sake the Sea Lion."

-Nikki Dinsmore successfully presented and defended her capstone thesis on increasing the depth monitoring speed of the sea lion camera.

Proposals

-A Whale tail grant for Sea Lion Stewards Program was funded by California Coastal Commission. Submitted progress reports in July and November.

Permits

- After over two years of permit application and correspondence, we received a NMFS permit allowing us to acquire stranded California sea lion and harbor seal pups.
- Submitted a new IACUC proposal for Sea Lion Stewards and other educational programs at SLEWTHS – approved through 3/7/08
- Submitted a new IACUC proposal for Sea Lions Physiology –approved through 8/14/08
- Renewed our APHIS public display license.

Education and Public Outreach

Sea Lion Stewards Environmental Education Program and Beach clean-up activities

Conducted 20 Sea Lion Stewards half-day programs for over 688 K-12 participants who collected over 345 lbs of garbage from our local beach in the process.

Generated a Memorandum Of Agreement to formalize and delineate our collaboration with Save our Shores in the Sea Lion Stewards program. Unfortunately, SOS was unable to continue the collaboration after the summer due to staff turn-over problems, so the SLEWTHS project therefore assumed full and sole operations of the Stewards program. We developed new contact materials and administration infrastructure. Allison Reesh was given the position as the Stewards coordinator.

Sea Lion Encounters Public Outreach Program

Based on daily performance tallies an estimated 34,365 people attended 82 performances of *Sea Lion Encounters* in 2005.

Sea Lion Encounters was featured at

- The Western Idaho State Fair, August 19-28
- The Santa Cruz County Fair, California September 13-18- During this fair we raised \$350 to donate for the victims of Katrina. We donated to Habitat for Humanity to help rebuild New Orleans.
- Lake Paris Fair, California October 8-16

Tours

23 private tours and/or demonstrations were provided on-site by SLEWTHS

- 1/25/05 New MLML student tour and sea lion demonstration
- 2/22/05 Tour for K. Coale, family and MLML donors
- 3/30/05 Tour for Donna Kline and family
- 4/16/05 MLML Open House Day 1: Provided four sea lion training demonstrations for 303 people attending open house.
- 4/17/05 MLML Open House Day 2: Provided four sea lion training demonstrations for 347 people attending open house.
- 4/27/05 Provided a tour and demonstration for the MLML docents training class.

- 6/30/05 Provided a tour and demonstration for Simona Bartl and Friends of MLML teacher workshop group.
- 7/08/05 Provided a tour for Friends of MLML high school tour group.
- 8/2/05 Provided a tour and demonstration for CSU Chancellor and Vice Chancellor with K. Coale.
- 8/19/05 Provided a tour and demonstration for D. Kline and several SJSU employees
- 8/21/05 Provided a tour and demonstration for W. Cochran and family.
- 9/13/05 Provided a tour and demonstration for K. Coale and Calstate President and entourage.
- 10/4/05 Provided a tour and demonstration for K. Coale and SJSU foundation employees.
- 10/20/05 Provided a half day tour and elaborate training demonstration for Moorpark college's Exotic Animal Training and Management Program's class of 05.

Classes

- A total of 43 undergraduate students attended Cal State classes taught by Dr. Hurley
 - 33 students from the US, Canada, and Europe attended intensive immersion classes in marine mammalogy through CSUMB extended education department
 - 10 students attended a fall semester class from CSUMB

Internships

- 37 day-long internships for students were conducted
- 5 multi-day internships were also provided.
- 6 jr internships were provided for aspiring future marine mammalogists
- 8 *Certificates of Completion in Marine Mammalogy* were earned by people who successfully completed both classes and a week-long internship.

Student projects

- Jamie Mullins completed the write up of her UCSC thesis investigating the affects of food temperature on measured stomach temperature in a female California sea lion. She was awarded honors in her thesis for this work!
- Heather Yeager having completed a year's worth of data collection for her CSUMB capstone thesis on molting dynamics in California sea lions, began her analysis and write up of the data to be completed in 2006.
- Jackie Rifkin developed a children's book based on our sea lion, Sake, and her life adventures. Jackie successfully defended her thesis in December and published the book!
- Nikki Dinsmore completed and defended her capstone thesis on the sea lion camera/depth encoder.

- Nancy Wenkel began her capstone research by taking over the molting research from Heather Yeager to continue the project for another year with the addition of two new baby sea lions in the data collection.

Media

- SLEWTHS was featured on local news April 17th KSBW channel 8 for our participation in MLML's open house.
- SLEWTHS was featured in the Santa Cruz Sentinel April 16th for our participation in MLML's open house.

Consulting and Contract Work

- Dr. Hurley was asked to become an editor for the International Marine Animal Trainers Association publications committee. In this capacity she edited several papers for *Soundings* throughout the course of the year. She has also agreed to serve the same organization in the newly developed Accreditation Committee. Dr. Hurley will assist in developing and assessing instructional material used to accredit animal handlers and trainers.
- In July ATR was contracted by the newly-founded Georgia Aquarium to temporarily foster and train 2 stranded unreleasable sea lion pups: Nav and Diego. They were housed with SLEWTHS through early November.
- Dr. Hurley volunteered to head up the abstract committee for the 2006 Animal Behavior Management Alliance meeting. She acted as the primary point of contact for all presenters at the meeting, collated all of the abstracts, formed a review committee, and prepared the abstracts for review and use by the board of directors. In the coming year the abstracts will be reviewed and correlating correspondence will occur regarding the prospective author's presentations.

Facilities

Projects

- Re-covered T1 decks with linoleum as a substitute to constantly repainting (and having the paint peel up)
- Used a gravel /cement mixture to cover the south compound and outback and beach gate entrances to the facility, eliminating most areas of walking on sand.
- Constructed and painted a new large shed to replace storage areas lost at old shore lab site.
- Designed and built new target poles for the facility and the Encounters program.
- Created new informative poster displays and banners for Encounters.
- Created new project brochure.
- Built new transportable facility (T3) suitable for housing 4 sea lions. Created modular decks, fencing and doorway.
- Built aluminum ice-drip trays for our sea lion truck transport system to keep the animals wetted during transport.

- Began work re-landscaping our back compound to allow us to install a larger 4th tank for the sea lions. This involved temporarily relocating our back pool to the front compound, removing large amounts of excess sand from the back compound (by the truck-load), and installing a new permanent retaining wall along the southeast, south, and southwest sides of the back area. Next year we will finish the project adding drainage and slope to the new back area and replacing the old pool with our newer and larger transportable one (T3) built earlier this year.
- We added new, permanent stairs leading down to the south compound area.

Acquisitions

- O'neill wetsuit company generously donated 9 new wet suits (shorty and full suits) to replace damaged and stolen suits.
- Linoleum was donated to recover T1 decks.
- Purchased a new shed kit for storage of *Encounters* related supplies.
- Purchased a new larger portage pool (T3) to house 3 animals remotely.
- Purchased a new corded drill.
- Purchased sound system speakers, CD player, and wireless microphones for our *Encounters* presentations.

Animals

This year was a big year of baby sea lions for us. We acquired two baby demoic acid survivor sea lions both females: Zoey and Cali, in January. In May, Ariel returned from her foster family and Zoey was relocated permanently to her new home at Squalus Inc. We also temporarily fostered two male repeat-strander sea lion pups: Nav and Diego.

Behaviors started but not completed this year are called *started*, behaviors started and completed this year are called *learned*, work in progress behaviors neither started nor completed this year are called *working on*, and behaviors started in a previous year and finished this year are called *finished*.

Beaver

Beaver became completely blind this year and now is in full retirement. We developed an entirely new training program to communicate with him through only touch and verbal commands.

- Finished verbal only SD's
- Working on seal
- Learned tactile line-ups
- Learned step high and low

Sake

- Finished balance while tumbling
- Finished follow me chain behavior
- Working on slowly concept
- Working on hurdles
- Learned tooth brushing
- Started painting
- Started look to the left
- Started embarrassed

Nemo

- Finished porpoise
- Finished tap
- Finished pillar/catch
- Finished salute to the left
- Working on throw
- Working on water work
- Learned wave on the right
- Learned tongue
- Started balance/handstand
- Started tuck-up

Jonah

- Finished balance
- Finished handstand
- Working on transport training
- Working on Sea Lion Encounters performance
- Learned right wave
- Learned left salute
- Learned tooth brushing
- Started tongue
- Started tuck up

Ariel

- Learned rollover
- Learned lie down
- Learned land hold
- Learned salute
- Learned cage
- Learned porpoise
- Learned retrieval
- Learned foot
- Learned tuck-up and scale
- Started truck and transport

- Started molting research
- Started lengths research
- Started water spirals
- Started heeling
- Started bark
- Working on hold-fish
- Working on handstand
- Working on ball balance
- Working on seat
- Working on compound

- Working on throw and catch
- Working on Not
- Finished land spirals
- Finished clap
- Finished open mouth
- Finished front flippers
- Finished back flippers
- Finished hand target
- Finished remote target
- Finished wave

Cali

- Learned TP
- Learned water
- Learned remote targets
- Learned scale
- Learned compound
- Learned water hold
- Learned foot
- Learned up
- Learned full body tactile
- Learned front flippers
- Learned hand target
- Learned back flippers
- Learned cage
- Learned open mouth
- Learned land spirals
- Learned water spirals

- Learned salute
- Learned throat swab
- Learned molting research
- Learned lie down
- Learned land hold
- Started blood stick desense
- Started rollover
- Started hands-in mouth
- Started hold fish
- Started heeling
- Started take and retrieval
- Started seat
- Started back-up
- Started truck
- Started kiss
- Started 2nd person work

Zoey

- Learned TP
- Learned water
- Learned up
- Learned remote targets
- Learned scale
- Learned cage
- Learned water hold

- Learned land hold
- Learned seat station
- Started tactile
- Started front flippers
- Started foot
- Started wave
- Started compound

Nav and Diego

- Learned water
- Learned water hold
- Learned up
- Learned target pole

- Learned cage
- Learned feeding on land
- Started remote targets
- Started tactile

Smitty

-Working on Stand

-Working on bow

-Working on podium work
-Working on level 2 riding

- Working on bit training
- Working on Spanish Walk

Staff

4 new people were hired into *Animal Care*

(Danielle Gurzi, Chelsie Newbill, Lauren Paulson, Ashley Regalia)

7 people left the project after an average longevity of 2.5 years

(Kristi Leikvoll (2.6yrs), Ashley Miffit (1 yr), Sarah Stuve (1.25yrs), Allison Cochran (1.25yrs),
(Chelsea Williams (2.25yrs), Natalia Guzman (3 yrs), Amber Stephens (6 yrs))

7 people became *Senior Animal Care*

(Jennifer Gale, Coll Perske, Allison Cochran, Savannah Armstrong, Isis Andrade, Danielle Gurzi,
Chelsie Newbill)

4 people became *Assistant Trainers*

(Siobhan Crosby, Jennifer Gale, Savannah Armstrong, Coll Perske)

2 people became *Trainers*

(Jackie Rifkin, Nancy Wenkel)

1 person became a *Senior Trainer*

(Gina Paolini)

3 people received their *Multi-year Senior Trainer* anniversary Badges

(Allison Reesh, Amber Stephens, Heather Yeager)

Allison Reesh was promoted to Head Trainer

Stefani Skrovan was promoted to Curator of Animals