

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

**END OF THE YEAR SUMMARY
2020**



In early 2020, Covid-19 devastated the income streams and basic operation of SLEWTHS at all levels (logistical, financial, and manpower). Survival and basic maintenance of the facility, safety protocols, and cost-cutting continue to take center stage through the end of 2020. Our animals and their habitat need 30 person hours of care daily regardless of the pandemic, so closing down was not an option. Our bills remained mostly the same but nearly all income was terminated: we took in only 10% of our revenue compared to 2019. We are proud that despite these dire circumstances not one person became sick with covid through working with SLEWTHS in 2020.

Research

Sea Lion Maneuverability Study

In early 2016, 1.3 of our sea lions participated in a pilot study to digitize and quantify sea lion maneuverability and physical characteristics working with Dr. Frank Fish of West Chester University. This work was submitted to the Office of Naval Research as a pilot study, requesting funding as part of a three-year investigation. The grant was awarded in 2017 and research began seasonally in 2018.

In 2020, the final year of the 3-year study, we collected data using all 5 of our California sea lions for the first time. Data collection in 2020 focused on digitizing the sea lions while they were walking or galloping on land. The adult sea lions were filmed walking on different surfaces and up and down stairs while wearing zinc oxide dots specifically placed for reference points. Our two younger sea lions were desensitized and trained for this process. All five sea lions were filmed taking a small step up onto their scale. This work has been approved for a continuing 3-year renewal of funding. In March, university and state covid restrictions halted all research for the year, but the training to prepare the youngest sea lions for walking on different surfaces and have zinc dots applied continued.

Publications, Presentations, Proposals and Permits (P⁴)

Publications

- Numerous overhauls and edits were made to the SOP manuals for the Encounters and regular laboratory operations.

- The staff as a whole wrote and published 1 volume of our *Inspiring Minds* Newsletter (Jan20) and Dr. Zeligs produced 2018, 2019 and 2020 end of year reports.

- An ad for Jr. interns was created and published in a local periodical in their summer camp special edition. (All internships were closed down by the time publication appeared, however)

Holmstrom, S. E., DVM (2021). Dental Management Of Pinnipeds. In P. P. Emily and E. R. Eisner (ed.), *Zoo and Wild Animal Dentistry*. Wiley-Blackwell. (Images of sea lion radiographs used)

Kerr S.J., Anthony J. Nicastro, Jenifer Zeligs, Stefani Skrovan, and Frank E. Fish, (in review). Biomechanical Energetics of Terrestrial Locomotion: California Sea Lion vs. Northern Elephant Seal. Society for Integrative and Comparative Biology.

Cole, M, **J.A. Zeligs, S. Skrovan**, P.T. Madsen and B. McDonald (in review). Head Mounted Accelerometry Accurately Detects Prey Capture in California Sea lions (*Zalophus californianus*). Animal Biotelemetry.

Zeligs, J.A. (in review). *Mindful Partners: The Zen art and science of working with animals*. Dr. Zeligs completed the text and did two rounds of edits to her second book. At the end of 2020 it was with the copy editor for the final polish prior to publication. Expected publication 2021.

Presentations and conference participation

-*We Are One* Polish horse welfare online conference invited presentation by Dr. Zeligs “Training for voluntary husbandry and medical purposes with horses increases welfare and trust.” June 2020.

-Online Horse Fair International, Oct 19-25,2020. Dr. Zeligs pre-recorded 2 presentations as one of 100 horse trainers internationally presenting at the fair. “Exploring positive reinforcement training in horses.” and “Training for voluntary husbandry and medical purposes with horses increases welfare and trust.”

Proposals and Permits

-Renewed our APHIS public display license.

-Re-applied for a new 3 year IACUC protocol for #1009 with extensive review and 10 pages of new documentation being required by university review committee.

-Renewed IACUC protocol # 887

-Extensive documentation on daily activities, staff training and emergency protocols were submitted to SJSU as a result of covid shut downs in order to maintain necessary authorization for staffing to continue.

-We created a fundraising site and campaign to raise funds to feed the sea lions in response to massive funding shortfalls from covid19: <https://save-our-sea-lions.causevox.com/>. We received over 150 individual donations between this campaign and our university donation account totaling over \$23,000.

Education and Public Outreach

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

SLEWTHS conducted one Sea Lion Stewards half-day program for 24 participants who collected over 5 lbs of garbage from our local beach. All in-person Stewards programs were canceled from March through December due to Covid-19

university policy. Head Trainer Michelle Jones, compiled a video of the Stewards program to be able to send to teachers so they could experience a Stewards program digitally. We conducted 4 Online Sea Lion Stewards programs.

All 2020 Sea Lion Encounters Public Outreach Programs were canceled due to covid 19.

Tours for MLML, CSU, and other academic institutions

2 private tours and/or demonstrations were provided on-site by SLEWTHS before all visitation was canceled due to university covid policy.

- 1/30/20 Sea lion Experience for 10 people
- 3/2/20 tour for JZ friends

Classes

- In January, 5 undergraduate students attended an in-person intensive immersion class in Bio 148: Introduction to Animal Training through CSUMB extended education department representing 2 different universities. In late December 6 CSUMB students took a new online course offered through the Psychology Department- Psych 395- Introduction to Animal Training. This results in a total of 11 students taking university classes with SLEWTHS this year through CSUMB. Summer offerings were canceled due to university covid policy,

-Dr. Zeligs created and taught a new online class: *Mindful Partners Online - Coronavirus, a chance to connect with your pets*. The four week live online course was taught weekly from May 6- 27, 2020 and attended by 38 people from all over the world. This course was later modified as part of our growing online catalog of courses available on-demand on Thinkific.

-29 students from around the world took part in an on-demand online course offered on Thinkific (either AT101 parts 1,2, or 3 or Mindful Partners- Connect with your pets). 2 students also earned General Behavior Modification Certificates.

Workshops

-Conducted a two-day horse training workshop near Fresno, CA entitled, "A positive start to positive reinforcement training." June 13 -14, 2020 for 19 people (8 participants) to fund raise to feed the sea lions.

Internships

- 5 day-long internships for class students were conducted
- 1 Jr. Internship was provided for aspiring future marine mammalogists

Student projects

Service learning through CSUMB was canceled in spring 2020. Max Rudelic did service learning through CSUMB in fall 2020.

Media

- SLEWTHS staff created numerous Instagram and Facebook posts to promote ATR and SLEWTHS activities.
- JZ did interview on blog with world famous horse dressage trainer, Karen Rolf in April 2020
- SW did a BizTV interview in Oct. 2020

Facilities

Projects

- We raised the back compound fence height to meet APHIS requirements
- Cleaned out the main outflow caisson
- Created possum deterrent blockades
- Repaired a hole in Clyde truck's roof

Acquisitions

- Replaced a trailer couch and trailer staff refrigerator.
- A new animal podium was made to replace the old one.

Animals

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*.

Nemo

- Finished yes
- Finished throw/catch

Ariel

- Working on ultrasound training
- Working on blood stick
- Working on tongue

Cali

- Finished Upset
- Working on cage anesthesia training

Gaia

- Finished Flexible
- Finished balance
- Finished 2nd person interactions at MLML
- Finished pc open mouth

- Working on put
- Working on side compound training
- Working on PC toothbrushing
- Learned drink
- Started hold fish
- Started catch/throw
- Started bloodstick desense
- Started RE walking on mats with zinc dots
- Started panels down work

Freya

- Finished hold fish
- Finished balance
- Finished flexible
- Finished catch/throw
- Finished PC open mouth
- Finished side compound training
- Working on PC toothbrushing
- Learned drink
- Started gimmie five
- Started side compound training
- Started panels down work
- Started bloodstick desense
- Started RE walking on matts with dots
- Started 2nd person interactions and kiss

Spot

- Working on retrieve
- Working on circle
- Working on land hold
- Working on 2nd person work

Staff

3 new people were hired into *Managed Care*

(Jason Gonsalves, Oceana Heath, Jennifer Torrey)

1 person left the project after passing their trial period after an average longevity of 5 years

(Bree Wheeler (5yrs), also several lower and entry level staff members left due to covid in 2020: Enrique Gamez, Danielle Kendrick, Cydney Hampton, Chris Torres-Funakoshi, Rachel Torres, Gretchen Suan)

1 person became Animal Care

(Max Rudelic)

2 people became *Senior Animal Care*

(Caitlyn Swe, Haley Booth)

3 people became *Assistant Trainers*

(Kali Prescott, Caitlyn Swe, Haley Booth)

2 people became *Trainers*

(Jessie Rodriguez, Kat Weinmeister)

1 person became *Trainer level 2*

(Bree Wheeler)

There were no paid contracts this year.