



Barry, Anna <anna_barry@fws.gov>

Re: Application for Renewal of PRT MA-770191

2 messages

Cogliano, Mary <mary_cogliano@fws.gov>

Mon, Aug 1, 2016 at 1:25 PM

To: Jim Valade <jim_valade@fws.gov>

Cc: Jay Herrington <jay_herrington@fws.gov>, Heath <heath_rauschenberger@fws.gov>, Anna Barry <anna_barry@fws.gov>

Thank you, Jim,

We logged in the application as "received Aug. 1, 2016," so you will be able to continue with your activities permitted under 770191.

Please mail us the first page of the application with the original signature for our files.

Best regards,

Mary

On Fri, Jul 29, 2016 at 6:01 PM, Jim Valade <jim_valade@fws.gov> wrote:

Mary,

Please find attached a copy of our application to renew our permit for the manatee rescue and rehabilitation program, PRT MA-770191. I'll look forward to discussing our application with you at your convenience. Thanks and have a good weekend,

Jim

(And thanks, too, for your and Anna's help this afternoon, it's greatly appreciated!)

Jim Valade

Florida Manatee Recovery Coordinator

US Fish and Wildlife Service

North Florida Ecological Services Office

7915 Baymeadows Way Suite 200

Jacksonville, Florida 32256

E-mail: Jim_Valade@fws.gov

PHONE: 904 731-3116

OFFICE: 904 731-3336

FAX: 904 731-3045

www.fws.gov/northflorida

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Mary Cogliano, Ph.D.
Supervisory Biologist & Policy Specialist
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

Jim Valade <jim_valade@fws.gov>

Mon, Aug 1, 2016 at 1:29 PM

To: Mary Cogliano <mary_cogliano@fws.gov>

Cc: Jay Herrington <jay_herrington@fws.gov>, Heath Rauschenberger <heath_rauschenberger@fws.gov>, Anna Barry <anna_barry@fws.gov>

Mary,

Thanks Mary, really appreciate the help! The original application was overnighted last Friday so there should be an application with the original signature somewhere in your office. Please let me know if there's a problem.

Jim

From: Cogliano, Mary [mailto:mary_cogliano@fws.gov]

Sent: Monday, August 01, 2016 1:25 PM

To: Jim Valade

Cc: Jay Herrington; Heath; Anna Barry

Subject: Re: Application for Renewal of PRT MA-770191

[Quoted text hidden]



Barry, Anna <anna_barry@fws.gov>

FW: back-up veterinary coverage

2 messages

Teresa Calleson <teresa_calleson@fws.gov>

Fri, Feb 15, 2019 at 1:22 PM

To: Anna Barry <anna_barry@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>

Cc: Jay Herrington <Jay_Herrington@fws.gov>, Larry Killmar <larry.killmar@lowryparkzoo.org>, Leeann Rottman <leeann.rottman@lowryparkzoo.org>

Hi Anna, Mary and Pam,

This morning, the North Florida Ecological Services Office (NFESO) received the email correspondence below from Dr. Killmar at ZooTampa. Just letting you know that Jay and I have discussed and that we are fine with Dr. Killmar's suggestions for backup veterinary services. I'm familiar with all of the Sea World vets, Dr. Walsh (Univ of Florida), and both Dr. Persky and Dr. Jafarey from the Jacksonville Zoo and can supply their resumes/CVs, if needed. All of their resumes/CVs are part of their individual facility's packages (sent to Anna) as part of the ongoing permit renewal process. All are qualified manatee vets and should meet the requirements to provide critical care veterinary services as backups for this facility. Typically, during the Letter of Authorization process, I believe that the Division of Management Authority (DMA) typically requests that I have the facility provide you with the written documentation of these arrangements (i.e. contracts, agreements, etc.) but I will defer to how you see best to proceed from this point, as the permitting entity, for the US Fish and Wildlife Service. For example, Dr. Walsh also has such an agreement with Clearwater Marine Aquarium. Thanks so much and thanks to Dr. Killmar for providing these alternative vets for consideration! With DMA being the permitting entity, NFESO would like to request that DMA provide your response regarding the alternative veterinary arrangements to ZooTampa staff as soon as possible. Thanks!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Larry Killmar [mailto:Larry.Killmar@ZooTampa.org]

Sent: Friday, February 15, 2019 9:53 AM

To: teresa_calleson@fws.gov; Jay_herrington@fws.gov

Cc: Larry Williams (larry_williams@fws.gov); Joe Couceiro; Pardo, Michelle; Leeann Rottman; Lauren Smith; Dold, Chris

Subject: [EXTERNAL] back-up veterinary coverage

Jay and Terri, I have been in discussions with Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, about providing Dr. Lauren Smith, with back- up veterinary services for manatee care from his staff, if the need arises. He has agreed

and asked that I contact you and receive the services endorsement to that effect. SeaWorld's staff would be in addition to Dr. Mike Walsh and the veterinary staff of the Jacksonville Zoo, Dr. Meredith Persky and Dr. Yousuf Jafarey, who will serve in that same capacity. As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

ZooTampa.org | Facebook | Twitter | YouTube



Consider the environment;

Think before you print!



Cogliano, Mary <mary_cogliano@fws.gov>
To: Anna Barry <anna_barry@fws.gov>

Wed, Feb 20, 2019 at 8:17 PM

Hi Anna,

Given the below, tomorrow lets discuss how we move forward from here.

Thanks,

Mary

[Quoted text hidden]

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Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

2 attachments



image001.png
17K



image002.png
2K



Barry, Anna <anna_barry@fws.gov>

ZooTampa

1 message

Barry, Anna <anna_barry@fws.gov>
To: Larry Killmar <Larry.Killmar@zootampa.org>

Tue, Feb 19, 2019 at 1:42 PM

Received, thanks.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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On Mon, Feb 18, 2019 at 6:26 AM Larry Killmar <Larry.Killmar@zootampa.org> wrote:

Anna Barry and Mary Cogliano,

To confirm, we have the following veterinarians as backups for Dr. Lauren Smith if the need arises:

- 1) Dr. Mike Walsh
- 2) Jacksonville Zoo veterinarians, Dr. Meredith Persky and Dr. Yousuf Jafarey
- 3) Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, has agreed to provide his veterinary staff at SeaWorld as well once he receives endorsement to that effect from the service. You should have an e-mail dated February 15, 2019 from Terri Calleson to that effect.

As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Larry

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

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Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

Cogliano, Mary <mary_cogliano@fws.gov>

Thu 2/28/2019 5:19 PM

To: Barry, Anna <anna_barry@fws.gov>

 1 attachments (17 KB)

20190221_RD_MRP_Response_Timeline_clean.docx;

----- Forwarded message -----

From: **A Alvarez** <aeric_alvarez@fws.gov>

Date: Sun, Feb 24, 2019 at 4:42 PM

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Mary Cogliano <mary_cogliano@fws.gov>, <gloria_bell@fws.gov>, <pamela_scruggs@fws.gov>

Here it is. I forgot that the attachment gets stripped off when one replies to the email.

A. Eric Alvarez
Acting Assistant Director
International Affairs

703-447-1064 (C)

703-358-2410 (O)

Begin forwarded message:

From: "Frazer, Gary" <gary_frazer@fws.gov>

Date: February 23, 2019 at 11:00:51 PM EST

To: A Alvarez <aeric_alvarez@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Shawn Finley <Shawn.Finley@sol.doi.gov>

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

FYI

Gary Frazer
Assistant Director -- Ecological Services
U.S. Fish and Wildlife Service
(202) 208-4646

----- Forwarded message -----

From: **Miranda, Leopoldo** <leopoldo_miranda@fws.gov>

Date: Fri, Feb 22, 2019 at 8:49 PM

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Gary Frazer <gary_frazer@fws.gov>

FYI -

Leopoldo "Leo" Miranda
Regional Director
U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, GA 30345
404-679-4000
Leopoldo_Miranda@fws.gov

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----- Forwarded message -----

From: **Arnold, Jack** <jack_arnold@fws.gov>

Date: Fri, Feb 22, 2019 at 6:15 PM

Subject: Re: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Miranda, Leopoldo <leopoldo_miranda@fws.gov>

Cc: Mike Oetker <michael_oetker@fws.gov>, Larry Williams <Larry_Williams@fws.gov>, Jay Herrington <Jay_Herrington@fws.gov>

Leo, Mike - I tasked Larry and Jay to develop the plan/timeline requested, and received the attached today. I believe this meets the intent of your request. If, after review, you have questions or would like to discuss further, please let me know - I'll be happy to schedule a briefing with you, me, Larry, Jay, and anyone else who needs to attend.

Thanks,

Jack Arnold
Acting Assistant Regional Director - Ecological Services
U.S. Fish and Wildlife Service
1875 Century Blvd.
Atlanta, GA 30345
404-679-7311 office
404-679-7081 fax
703-789-5620 cell

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On Fri, Feb 15, 2019 at 12:58 PM Miranda, Leopoldo <leopoldo_miranda@fws.gov> wrote:

Jack,

Recent developments at Zoo Tampa have exposed potential procedural and compliance problems in the way we manage and interact with the MRP. This was further highlighted by Eric Sutton's email to Gary Frazer on February 11, 2019. After talking to Gary and getting further clarification from Eric on his concerns, I would like the ES program to conduct an inquiry on how we interact with the WRP. I fully recognize that this is a long-standing partnership that has contributed significantly to the conservation of the West Indian manatee. My main objective with this inquiry is to clarify what are the roles and responsibilities of this group in relation to our (both FWS and State/territorial fish and wildlife agencies) fiduciary responsibilities and legal mandates, both under the MMPA and the ESA. Dual authorities and administrative chain of command (i.e., HQ Division of Management Authority (DMA) and the Southeast Region) complicates the situation even further. So I ask that you coordinate these efforts with DMA too.

There are two main authorities to manage the West Indian Manatee (ESA and MMPA). What I will need is for your ES team that deals with West Indian manatee and the MRP (e.g., JAX and BOQ) performs an internal inquiry addresses the following topics:

- **Roles and responsibilities of the FWS, the State/territory and those of the MRP.**
- **Clearly define what are the administrative/compliance procedures that needs to be followed under each authority.**
- **Identify the overlaps and any potential area of conflict between the authorities.**
- **Identify opportunities to increase efficiencies and benefits to the species.**
- **Identify any other issues that may be exposed during your inquiry.**
- **Develop recommendations on how to solve any of the conflicts with a pros/cons analysis.**

- **Identify a recommended path forward.**

Please take a look at this request and by Friday February 22, provide plan of how you will proceed and a proposed time-line. Before I close my note, I want to make it very clear that we value this long-established partnership and the main goal of this request is to find ways to better promote the conservation of the West Indian Manatee.

Thanks!

Leo

Leopoldo "Leo" Miranda
Regional Director
U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, GA 30345
404-679-4000
Leopoldo_Miranda@fws.gov

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Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

Re: ZooTampa

Barry, Anna <anna_barry@fws.gov>

Mon 3/11/2019 2:15 PM

To: Herrington, Jay <jay_herrington@fws.gov>

Thanks,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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On Mon, Mar 11, 2019 at 2:13 PM Herrington, Jay <jay_herrington@fws.gov> wrote:

Gil's cell phone number is (727) 423-3181

On Mon, Mar 11, 2019 at 2:08 PM Teresa Calleson <teresa_calleson@fws.gov> wrote:

Hi Anna,

I don't have Gil's phone number – but his email is Gil.McRae@MyFWC.com

JP's phone number is 321-689-6841 and his email is Jon.Peterson@SeaWorld.com

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Barry, Anna [mailto:anna_barry@fws.gov]

Sent: Monday, March 11, 2019 1:49 PM

To: Terri Calleson

Cc: Jay Herrington

Subject: ZooTampa

Teri,

Could you provide me the phone number and e-mail address of the following people?

1. Gil McRae of FWRI
2. Jon Peterson of SeaWorld

Thanks,

Anna Barry

Supervisory Policy Specialist

USFWS/Division of Management Authority

Branch of Permits, MS: IA

5275 Leesburg Pike

Falls Church, VA 22041-3803

1-800-358-2104, ext. 1976 or 703-358-1976

Fax: 703-358-2281

E-mail: Anna_Barry@fws.gov

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--

Jay B. Herrington

Field Supervisor

U. S. Fish and Wildlife Service

Northeast Florida Ecological Services Field Office

7915 Baymeadows Way, Suite 200

Jacksonville, FL 32256

(904) 731-3191 (phone)

(904) 731-3045 (fax)

E-mail: jay_herrington@fws.gov

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Curriculum Vitae

Yousuf S. Jafarey, DVM

(b) (6)



Education

- **Western University of Health Sciences** 2006-2010 D.V.M.
College of Veterinary Medicine
Pomona, CA
- **Emory University** 2000-2004 B.Sc., Chemistry;
Atlanta, GA Minors: Biological Anthropology, Mandarin Chinese

Experience

Jacksonville Zoo and Gardens Jacksonville, FL
November 2016 to Present
Veterinarian
Supervisor: Dan Maloney

Zoo Miami Miami, FL
August 2015 to October 2016
Associate Veterinarian
Supervisor: Gwen Myers, DVM

The Toledo Zoological Society Toledo, OH
April 2013 to
Associate Veterinarian
Supervisor: Ric Berlinski, DVM

The Toledo Zoological Society Toledo, OH
July 2011 to April 2013
Veterinary Internship in Zoological Medicine
Mentor: Christopher Hanley, DVM, DACZM

- Clinical internship in zoological medicine focusing on medical and surgical management of a zoological collection, including quarantine, nutrition, shipment, necropsy, and routine care. Research projects included medical management of uterine fibroids in old world monkeys and characterization of elasmobranch neoplasia.

DoveLewis Emergency Animal Hospital Portland, OR

July 2010 to Present

Veterinary Internship in Small Animal Emergency and Critical Care Medicine

Supervisor: Lee Herold, DVM, DAVECC

- Small animal internship focused in emergency and critical care medicine, with rotations in surgery, radiology, and cardiology.

Veterinary School Clinical Externships

Oregon National Primate Research Center Beaverton, OR

April 2010

Veterinary Externship in Primate and Laboratory Animal Medicine

Preceptor: Serena Riefenberg, DVM

New England Aquarium Boston, MA

November 2009 – December 2009, *Rotation in Aquatic Animal Medicine*

Preceptor: Charles Innis, VMD

Houston Zoo Houston, TX

October 2009, *Rotation in Zoo Medicine*

Preceptor: Maud Marin, DMV, DACZM

University of Illinois College of Veterinary Medicine Chicago, IL

September 2009, Zoo Pathology Program: *Rotation in Anatomic Pathology*

Preceptor: Michael Kinsel, DVM, DACVP

Woodburn Veterinary Clinic Woodburn, OR

July 2009, *Mixed Practice Rotation Focused in Camelid and Small Ruminant Medicine*

Preceptor: Paul Jones, DVM

Los Angeles Zoo Los Angeles, CA

October 2008, *Externship in Zoological Medicine*

Preceptor: Curtis Eng, DVM

Other Professional Development

Nature's Nursery Whitehouse, OH

October 2011 - August 2015

Volunteer Veterinarian

Director: Laura Zitzelberger

Southwest National Primate Research Center San Antonio, TX

June 2008 – August 2008
Summer internship in primate medicine
Mentor: Kathy Brasky, DVM, DACLAM

International Bird Rescue Research Center San Pedro, CA
September 2006 – May 2008
Volunteer
Mentor: Hayden Nevill, DVM

Alaska SeaLife Center Seward, AK
May to August 2006
Aviculture Intern
Supervisor: Tasha DiMarzio, Senior Aviculturist

Chateau Veterinary Hospital Kenner, LA
June 2004 – May 2006
Veterinary Assistant
Supervisor: Violet Nix, DVM

Publications

- Jafarey, Y. S., R. A. Berlinski, C. S. Hanley, M. M. Garner, and M. Kiupel. 2015. Presumptive dysgerminoma in an orange-spot freshwater stingray (*Potamotrygon motoro*). Accepted for publication in *J. Zoo Wildl. Med.*, currently in press.
- Jafarey, Y. S., C. S. Hanley, R. A. Berlinski, C. Warner, and A. Armstrong. 2015. Medical management of leiomyomata and suspected endometriosis in an Allen's swamp monkey (*Allenopithecus nigroviridis*). Submitted for publication in *J. Zoo Wildl. Med.*, currently under review.

Presentations

- “Wound Management in a Rehabilitation Setting” (Ohio Wildlife Rehabilitation Annual Conference, November 2012)
- “Critical Care of Exotics” (Ohio Wildlife Rehabilitation Annual Conference, November 2012)
- Poster: “Management of Uterine Fibroids and Ovarian Cysts with Leuprolide Acetate in an Allen's Swamp Monkey (*Allenopithecus nigroviridis*)” (American Association of Zoo Veterinarians Annual Conference, October 2012)
- Poster: “Presumptive Dysgerminoma in an Orange-spot Freshwater Stingray” (International Association for Aquatic Animal Medicine Annual Conference, May 2012)
- “Avian Emergencies” (DoveLewis Emergency Animal Hospital, May 2010)
- “Herpetologic Emergencies” (DoveLewis Emergency Animal Hospital, October 2010)

- “Laboratory Animal Welfare and Biomedical Research” (Ziauddin University, College of Medicine, June 2010)
- “Host Immune Defenses against Equine Infectious Anemia Virus” (3rd year student presentation, April 2009)
- “Hepatitis C Virus in Greater Apes: A Look at Tumor Virology” (Southwest National Primate Research Center Summer Symposium, August 2008)

Language Skills

- (b) (6)

Yousuf Jafarey, DVM

(b) (6)



Manatee Experience

2016:

February 14: manatee health assessments on 3 manatees in Port Everglades with Dr. Maya Rodriguez. Collected blood on 2 animals.

December 29: Dr. Mike Walsh taught several lectures on manatee care to the veterinary staff at the Jacksonville Zoo

February 8-9: health assessments in Crystal River, FL; collected blood from 3 animals with Dr. Mike Walsh and Dr. Craig Pelton; placed three transponder chips.

2017 - Present:

Assisted in rescue of manatees from Charleston, South Carolina, including performing health assessments and transporting animals to Florida.

Managed medical care for manatee at Jacksonville Zoo and Gardens manatee critical care center. These cases ranged from rehabilitation animals to critical cases requiring overnight care. Cold stress were the majority of cases managed. In total, managed care for 12 manatees at Jacksonville Zoo.

Participated in case management of manatees at Sea World, including performing chest taps for pneumothorax cases.

MEREDITH E. PERSKY, DVM

(b) (6)



STAFF VETERINARIAN

Jacksonville Zoo and Gardens, Jacksonville, FL July 2016-present

- Participate in all aspects of veterinary care for the zoo animal collection
- Updated and implemented preventative health program
- Collaborated with members of several departments to open the Jacksonville Zoo's Manatee Critical Care Center
- Rehabilitate sick and injured manatees for release to their natural habitat

ASSOCIATE VETERINARIAN

Zoo Miami, Miami, FL May 2012-June 2016

- Provided routine and emergency medical care to a large and diverse animal collection, with an emphasis on megavertebrate, primate, hoof stock, avian, and reptile medicine
- Selected to serve as the direct supervisor of two hospital keepers, two veterinary technicians, and one hospital clerk during a seven-month transition period
- Completed yearly evaluations (including disciplinary actions, when necessary) for members of the hospital team
- Served as the interim senior veterinarian/department head and primary solo clinician for 3000+ animals over a four-month duration
- Acquired new medical equipment to provide the highest standard of veterinary care at Zoo Miami
- Participatory role in upper zoo management decisions including establishing and reviewing protocols, serving on the Conservation Committee, and providing veterinary perspective to curatorial and keeper staff
- Coordinated efforts between state, USDA and public health veterinarians during two separate reportable disease incidents
- Nominated by the Director of Communications to be shadowed by a reporter and film crew for several months, which resulted in a 30-minute documentary: "Life and Death Inside Zoo Miami" <http://miami.cbslocal.com/life-and-death-inside-zoo-miami>

VETERINARY RESIDENCY

Kansas City Zoological Society, Kansas City, MO June 2010-April 2012

- Zoological medicine residency program accredited by the American College of Zoological Medicine incorporating all aspects of preventative care, diagnostic techniques, and medical and surgical treatment for a wide range of zoological specimens
- Primary clinical case responsibility, including sole responsibility of the animal collection for multiple four-week time periods
- Participated in confiscation of privately-owned chimpanzee
- Responded to several animal escapes, resulting in no harm to the animals or members of the public
- Involved with teaching fourth-year veterinary students

VETERINARY INTERNSHIP**Indianapolis Zoological Society**, Indianapolis, IN July 2008-June 2010

- Two-year clinical internship encompassing all facets of veterinary zoological medicine, including a diverse marine mammal and aquatic animal collection
- Primary clinical case responsibility for routine and emergency veterinary care of zoological species
- Responsible for managing all quarantined animals
- Actively involved with teaching fourth-year veterinary students rotating through the hospital

EDUCATION**Doctor of Veterinary Medicine** June 2008

Ohio State University College of Veterinary Medicine

Bachelor of Science in Biomedical Science August 2001

Texas A&M University

ADDITIONAL ZOOLOGICAL VETERINARY TRAINING**Safe-Capture Zoo/Wildlife Immobilization Course**, Indianapolis, IN December 2009**John G. Shedd Aquarium**, Chicago, IL May-June 2008

- Assisted with diagnostic examinations and treatment of diverse aquatic animal collection
- Exposed to fish and elasmobranch anesthesia and medicine
- Introduced to basic water quality testing and analysis

The Columbus Zoo and Aquarium, Columbus, OH August 2005- June 2008

- Participated in immobilizations and diagnostic examinations of many different zoological species
- Selected to be involved in the transport of three manatees to the Columbus Zoo
- Organized records for the Wildlife Trapping Program which focused on vaccinating wild animals which were trapped on zoo grounds

The Houston Zoo, Houston, TX April -May 2008

- Assisted veterinarians in the management, evaluation, and treatment of zoological collection animals and injured native wildlife
- Involved with immobilization and diagnostics of zoological species
- Administered treatments to hospitalized patients

Cleveland Metroparks Zoo, Cleveland, OH January 2008

- Assisted in daily case management and care of zoo animal collection
- Assisted veterinarians with medical records, diagnostic evaluation, and treatments

Potter Park Zoo, Lansing, MI August 2006

- Assisted veterinarian during routine physical examinations, emergency procedures, and follow-up examinations
- Worked with keepers in a variety of animal departments to learn husbandry and behavior training procedures

ADDITIONAL ZOOLOGICAL VETERINARY TRAINING (CONTINUED)

Northcoast Marine Mammal Center, Crescent City, CA July-August 2006

- Exercised basic marine mammal husbandry and rehabilitation tasks for pinnipeds including harbor seal pups, Steller sea lions, and northern elephant seals
- Participated in pre-release health assessments of harbor seal pups
- Responded to marine mammal stranding calls for living and deceased animals
- Supervised volunteer workers on a daily basis

RESEARCH EXPERIENCE

University of Texas Southwestern Medical Center, Dallas, TX September 2001-
Research Technician II, Laboratory Manager August 2004

- Hired as the first member of a new laboratory to coordinate the setup of the lab and train new personnel
- Completed an independent research project which required troubleshooting and analytical skills
- Presented research data at departmental meetings
- Became proficient in PCR, Southern and Western blotting, molecular cloning, and tissue culture techniques

COMPANION ANIMAL VETERINARY EXPERIENCE

Animal Care and Protective Services, Jacksonville, FL May 2017-present
Volunteer Veterinarian

- Perform ovariohysterectomies and neuters of domesticated animals

Spay Neuter Kansas City, Kansas City, MO January 2011- Apr 2012
Contract Veterinarian/ Volunteer Veterinarian

- Provided preventative medicine for domestic animals in an underprivileged community
- Performed spays and neuters on a volunteer basis

Worthington Woods Animal Care Center, Columbus, OH May- September 2005
Veterinary Technician/ Receptionist/ Animal Care Worker

- Performed and analyzed routine laboratory tests
- Utilized communication skills with clients during appointment scheduling and business transactions
- Involved with daily care of hospitalized and boarded patients

Rockwall Equine Center, Rockwall, TX May 2003-May 2004
Volunteer

- Participated in physical examinations, surgeries, diagnostic imaging, and joint injections
- Observed lameness examinations, artificial insemination, rectal palpations, and pregnancy evaluations
- Attended farm calls with veterinarians to learn about ambulatory care

Wellborn Road Veterinary Medical Center, College Station, TX March-August 2001
Veterinary Assistant/ Animal Care Taker

- Assisted veterinarians with routine examinations while learning about preventative medicine treatments
- Responsible for feeding, medicating, monitoring, and handling boarding animals

COMPANION ANIMAL VETERINARY EXPERIENCE (Continued)

Van Stavern Small Animal Hospital, College Station, TX August 2000- January 2001
Veterinary Assistant/ Receptionist

- Administered vaccinations and treatments under veterinarian's supervision
- Assisted with practice management
- Acquired hands-on experience in a veterinary hospital

PUBLICATIONS

Persky ME, Jafarey YS, Christoff SE, Maddox DD, Stowell SA, and Norton TM. (in press). Tick paralysis in a free-ranging bobcat (*Lynx rufus*) JAVMA.

Persky ME, Jafarey YS, Moegenburg TA, Laubscher A, Lasser MJ, Clyde VL, and Garner MM. 2018. Antemortem diagnosis and successful treatment of a complete molar pregnancy in a geriatric bonobo (*Pan paniscus*). J Zoo Wildl Med. 49(3): 828-832.

Suedmeyer WK, Pearce J, **Persky ME**, and Houck ML. 2014. Peters Anomaly in a Red Kangaroo (*Macropus rufus*). J Zoo Wildl Med. 45(3): 715-718.

Persky ME, Williams JJ, Burks RE, Bowman MR, Ramer JC, and Proudfoot JS. 2012. Hematologic, plasma biochemistry, and select nutrient values in captive smooth dogfish (*Mustelus canis*). J Zoo Wildl Med. 43(4):842-851.

Tyler DR, **Persky ME**, Matthews LA, Chan S, and Farrar JD. 2007. Pre-assembly of STAT4 with the human IFN-alpha/beta receptor-2 subunit is mediated by the STAT4 N-domain. Mol Immunol. 44:1874-1882.

Persky ME, Murphy KM, and Farrar JD. 2005. IL-12, but not IFN-alpha, promotes STAT4 activation and Th1 development in murine CD4+ T cells expressing a chimeric murine/human Stat2 gene. J Immunol., 174:294-301.

POSTERS

Wainstein, ME, MR Bowman, JS Proudfoot, JC Ramer, and JJ Williams. A Novel approach to treating exertional myopathy in recumbent ratites. Proceedings of the Annual Meeting of the American Association of Zoo Veterinarians, South Padre Island, Texas. 2010.

NATIONAL AND INTERNATIONAL LECTURES

Antemortem Diagnosis and Successful Treatment of a Complete Molar Pregnancy in a Geriatric Bonobo (*Pan paniscus*). Proceedings of AAZV/EAZWV/IZW Joint Conference, Prague, Czech Republic. 2018.

Diagnosis, Treatment, and Resolution of a Dermatophytosis Outbreak in a herd of Scimitar-horned Oryx (*Oryx dammah*). Proceedings of the Annual Meeting of the American Association of Zoo Veterinarians, Kansas City, Missouri. 2011.

Outbreak of Sarcocystosis in Rainbow Lorikeets (*Trichoglossus haematodus*) Housed in an Outdoor Aviary. Proceedings of the Annual Meeting of the American Association of Zoo Veterinarians, Kansas City, Missouri. 2011.

Granulomatous nephritis in the seahorse. Proceedings of the Annual Meeting of the American Association of Zoo Veterinarians, Tulsa, Oklahoma. 2009.

PROFESSIONAL ASSOCIATION MEMBERSHIPS

American Association of Zoo Veterinarians—Associate Member
American Association of Zoo Veterinarians—Leadership and Management Committee
International Association for Aquatic Animal Medicine—Member
Manatee Rehabilitation Partnership—Veterinary Committee and Steering Committee
Manatee Rehabilitation Partnership—Co-chair 2018
Jacksonville Veterinary Medical Society—Member
American Veterinary Medical Association—Member

PROFESSIONAL LICENSURE AND CERTIFICATIONS

Florida Veterinary Medical License
Indiana Veterinary Medical License
Ohio Veterinary Medical License
DEA License (including carfentanil)
USDA Accreditation
HAZWOPER 24-Hour Emergency Response Technician Program

MEREDITH E. PERSKY, DVM

(b) (6)



Manatee Experience

2005-2008:

Observed several procedures (as a veterinary student) on “Stubby” Manatee at the Columbus Zoo with Dr. Gwen Myers, including tube-feeding of medications and gruel as well as blood collections
Participated in the receiving end of a manatee transport, from the airport to the exhibit pool at the Columbus Zoo

2014:

December 16: manatee health assessments in Port Everglades with Dr. Maya Rodriguez

2016:

February 12: manatee health assessments in Port Everglades with Dr. Maya Rodriguez

August 18: health assessments in Homosassa with Dr. Ray Ball

August 24-25: MRP meeting

November 30: Manatee Health Assessment Seminar in Gainesville, FL

December 13- 14: health assessments in Crystal River, FL; collected blood from 4 animals with Dr. Mike Walsh

December 19: Sedation and Release of manatee from Lowry Park Zoo with Dr. Ray Ball

December 29: Dr. Mike Walsh taught several lectures on manatee care at the Jacksonville Zoo

2017:

April 26: MRP meeting

May 20-24: attended IAAAM conference

June 1: assisted FWC with rescue and release of an entangled manatee

July 6: attended manatee amputation procedure at SeaWorld Orlando

August 30: 1.1 manatees arrived at Jacksonville Zoo for rehabilitation (“Buckeye” and “Cassie”; both released in march 2018)

November 28: participated in transport of 2 manatees from Charleston to Jacksonville

helped process 10 manatees in Jacksonville; kept cold-stress case at MCCC (“Carolina”)

November-December: tube-fed cold-stress manatee, blood collection; released “Carolina” in January 2018

December 17: provided supportive care to critical hypoglycemic cold-stress calf presented to Jacksonville Zoo. Administered IV glucose, IV fluids and transported manatee to SeaWorld Orlando (stabilized blood glucose) (“Percy”)

MEREDITH E. PERSKY, DVM

(b) (6)

Manatee Experience (continued):

2018:

March 2018: received rehabilitated manatee from SeaWorld (“MJ”)

March 2018: triaged hypoglycemic, cold-stressed male manatee (“Vilanzo”); released in May 2018

May-July: performed multiple blood collections, assessments, and treatments on hospitalized manatees (“Miller and Vilanzo” as needed)

April 11-12: MRP meeting Clearwater Marine Aquarium

August 30: MRP Meeting, Homosassa Springs Wildlife State Park

September: manatee with head trauma transferred from SW Orlando for rehabilitation (“Briar Rose”); released in November 2018

October: manatee with fractured ribs/previous pneumothorax (“Frankie”) transferred from SW Orlando to the Jacksonville Zoo for rehabilitation; released in December 2018

November: received adult male animal with signs of cold stress from South Carolina (“Top Gun”); currently undergoing rehabilitation at the Jacksonville Zoo



Joseph A. Couceiro
Chief Executive Officer

December 20, 2018

JAN 29 2019

Anna Barry
Senior Biologist
Branch of Permits, Division of Management Authority
United States Fish & Wildlife Service
5275 Leesburg Pike, MS:IA
Falls Church, VA 22041-3803

**Re: Lowry Park Zoological Society of Tampa
Renewal of Authorization for Manatee Rescue, Rehabilitation and Release (Federal
Fish and Wildlife Permit No. MA770191-5)**

Dear Ms. Barry:

This letter responds to your December 7, 2018 email correspondence in which the U.S. Fish and Wildlife Service ("FWS") requested additional information related to Lowry Park Zoological Society of Tampa's ("ZooTampa" or "the Zoo") request to renew authorization under the Marine Mammal Protection Act and the Endangered Species Act to rescue, rehabilitate, release and post-release monitor manatees. More specifically, this latest inquiry relates back to additional allegations against Dr. Ray Ball, which purportedly were presented to Craig Pugh (former CEO) and Elizabeth Hennig (current Sr. VP/Chief Financial Officer) on September 26, 2012. It is suggested that the Zoo took no action in response to these concerns. As we explain below, some concerns were raised and the Zoo responded appropriately. Below we have provided a summary of what occurred, the steps taken at the time to effectively address staff concerns, followed by a response to each of the specific concerns.

Background

By way of background, Dr. Ball was hired by the Zoo in September 2010. From the period following his hire to the alleged report in September 2012, some tension developed between members of the Florida Mammals team at the Zoo and Dr. Ball. After several concerns were raised about veterinary care – and in order to get a better understanding of the situation – then CEO Craig Pugh held a series of meetings during this time frame with the animal care staff without the presence of Animal Care Managers or Curators present to ensure "safe," comfortable and open dialogue. As a result of these meetings, and in an effort to continue providing avenues to address animal care concerns, in December 2012, through the encouragement of Craig Pugh, Jennifer (Blank) Galbraith began developing an outline for a new animal welfare committee to insure

animal caretakers had a voice and a mechanism for sharing concerns. Further, Dr. Ball was sent to Leadership Training in December 2012.

To examine whether any reasons existed for concern about Dr. Ball's actual medical care practices, the management team (Craig Pugh, CEO, Dr. Larry Killmar, Chief Zoological Officer and Elizabeth Hennig, then CFO and Director of Administration) brought in two outside veterinarians to conduct a formal review, inviting them to evaluate and inspect the medical sciences program from top to bottom. The Zoo reached out to the veterinarians to arrange the review on February 26, 2013. The actual evaluation was conducted May 13-14, 2013, and a report was submitted to the Zoo on June 10, 2013.

That report, a copy of which is attached, commended the Zoo's "excellent" achievement of the requirements and expectations of the American Association of Zoo Veterinarians (AAZV) and the Association of Zoos & Aquariums (AZA). See Attachment A at 1 (Executive Summary – Lowry Park Zoo Program of Veterinary Care Assessment). They also commended Dr. Ball's "harm:benefit based approach to preventive medicine and collection management" but made some recommendations regarding the need for ongoing communication and dialogue and updating of procedures. Id. Nothing in the report suggested that issues existed regarding medical competence.

Specific Issues

Against this backdrop, our response to the specific issues raised by FWS are summarized below.

A. Issues Related to Manatee "Dana"

1. Use of Radiograph with Chest Tap

FWS has asked us to respond to issues related to manatee "Dana" (#103003), specifically with respect to chest tap procedures. The subject of chest taps and their use in the treatment of manatees was well documented in our prior response on this subject. See FWS Response dated 12/7/2018, pages 4-6, section I.

The attached records for manatee #103003 summarize the course of treatment administered. See Attachment B (5/8/2012 through 7/14/2012 Medical Records for Manatee #103003). As indicated by the records, pneumothorax was an issue, and multiple chest taps were performed. The concern that was raised suggests that the initial taps were somehow incorrectly placed because radiographs were not used in connection with the procedure. Such an assertion fails to recognize that radiographs are not considered standard for chest taps. This is because they often are not the most accurate due to the need for multiple views to obtain a three dimensional perspective, the lag time between the radiograph procedure and the actual chest tap due to the need to review and interpret film, and the possibility of a change in condition due to the shifting of the animal during the procedure. Radiographs also would have required moving the manatee to the hospital, which for manatee #103003 was not advised because it would be painful and the animal was fractious (irritable). Ultrasound (US), percussion, or palpate are all more common and effective methods that can be used to perform chest taps. Even then, the size and condition of the animal can make it difficult to locate the exact air placement, meaning several taps can be required.

2. Location of Procedure

FWS asked us to respond to an issue that was raised about wound treatment not being performed in a sterile environment. In the course of manatee medical care, numerous procedures are performed on the pool deck, including treatment of wounds. Opening a contaminated wound in the manner as described in the medical record (for change of dressing, lavage with sterile water and packing of wound) is an acceptable practice. Abscesses are often drained in this manner, and it is simply not possible to sterilize a wound like the one presented here. Indeed, the medical record notes from June 16, 2012, reflect improvement following the procedure.

3. Administration of Antibiotic

FWS also indicated that an issue has been raised about the administration of an antibiotic; specifically, that a drug administered orally should have been administered by injection. The administration of medication also was addressed in our prior correspondence, in which it was noted that veterinary experience and clinical judgment informed decisions regarding medication selection and administration. See FWS Response dated 12/7/2018, page 11. These decisions are often informed by the individual animal's unique circumstances and medical history. In this instance, the July 3, 2012 medical notes reflect the underlying rationale for the antibiotic and why the route of administration (oral) was thought to be effective. Specifically, the treating veterinarian determined that an alternative route of administration was needed because of this manatee's particular wounds, surgery, and tendency to form abscesses and/or hematomas.

B. Issues Related to Manatee "Maggie"

FWS asked us to respond to an allegation that Dr. Ball "lied" to the Zoo's Florida Mammals team about receiving approval from former animal care supervisor Virginia Edmonds prior to euthanizing manatee #102981 ("Maggie"). To the best of our recollection, this was a point of dispute that arose between several staff members after the March 7, 2012 humane euthanasia of manatee #102981. The medical records for this manatee reflect both Zoo staff and Florida Fish and Wildlife (FWC) consultation on euthanasia on March 6, 2012. See Attachment C (3/5/2012 through 3/7/2012 Medical Records for Manatee #102981). The dispute seemed to be over whether the Zoo's Animal Care Manager (Edmonds) had "approved" the procedure, or whether it was simply discussed.¹ In order to prevent such disputes going forward, the Zoo adopted a written euthanasia policy in September 2012 that detailed the consultation expected to occur to insure that animal care staff had input into such decisions. See Attachment D (Euthanasia Policy, effective 9/5/2012).

¹ At the time of the dispute, Ms. Edmonds was employed by the Zoo as an Animal Care Manager. She had both field work and administrative/supervisory duties in the Florida Mammals division, but was not a veterinarian. Ms. Edmonds is no longer employed by the Zoo. She currently is a member of the Manatee Rescue & Rehabilitation Partnership ("MRP").

C. Giraffe Necropsy Conducted in Manatee Hospital

FWS also asked us to confirm whether the Zoo had performed a necropsy of a giraffe in the manatee hospital. The Zoo can confirm that this is correct, but was not inappropriate. On August 27, 2011, a deceased giraffe was moved to the climate-controlled clinic area adjacent to the manatee pools. At that time, the use of this area was not limited exclusively to manatees. This facility was deemed suitable for necropsy of the large ungulate (giraffe) for a period of time during which portions of the Zoo's old veterinary hospital were under demolition in order to make way for construction of a new veterinary hospital. As is the case with any necropsy, proper sanitation practices are followed to avoid any risk to other animals.

D. Issues Related to Manatee "Amanda"

The fourth issue that FWS asked the Zoo to address concerned manatee #HS8601 ("Amanda") and allegations that she died during a biopsy of a mammary mass after experiencing compromised anesthesia/ventilation. Medical issues and treatment related to manatee #HS8601 were addressed in our prior correspondence. See FWS Response dated 12/7/2018, page 11, section B, paragraph 2.

Summary

We do not dispute that some staff concerns were raised with the Zoo over six years ago, in 2012. However, the Zoo acted reasonably in response by: (1) meeting with staff privately to understand concerns; (2) arranging an outside veterinary team to review medical practices; (3) sending Dr. Ball to leadership training; (4) creating a euthanasia policy to insure internal consultations were conducted and documented; and (5) creating an Animal Welfare Committee process to address any future general concerns. As these concerns were analyzed and addressed in a timely matter back when they occurred, we respectfully submit that none of them properly form a basis to deny the renewal of the Zoo's authorization to rescue, rehabilitation, and release manatees.

As previously indicated, we remain committed to answering all of FWS's questions regarding our current manatee program and manatee professionals. We are able to discuss these issues by telephone or in person in your offices at your convenience.

Sincerely,



Joseph A. Couceiro
President and CEO

Attachments

Tampa's Lowry Park Zoo Manatee LOA 2017

Contents:

Letter of Authorization (LOA) application

Manatee Program Overview

LOA application documentation to verify, rescue, transport, hold and rehabilitate manatees

Veterinary Department Resume's

Florida Mammals/husbandry department resume's

Copy of USDA license

Copy of USDA 2016 Inspection report

Manatee Death Case Summaries

Manatee Death Report

Current Manatee Taxon Report (number of manatees in holding and critical care)

TLPZ Animal Research Policies and Protocols

From: [Virginia Edmonds](#)
To: [Jim Valade](#)
Cc: [Leeann Rottman](#)
Subject: Tampa's Lowry Park Zoo LOA
Date: Thursday, June 22, 2017 4:42:00 PM
Attachments: [TLPZ LOA 2017 Contents.pdf](#)
[Request Form for LOA v 3-1-17 \(002\).docx](#)
[Manatee Program description 2017 \(002\).doc](#)
[LOA application documentation 6.22.docx](#)
[Veterinary Hospital Resumes.zip](#)
[Florida Mammals resumes.zip](#)
[USDA license.pdf](#)
[USDA report October 2016.pdf](#)
[Case Summary on Manatee DNS LOA June 2012 to June 2017.docx](#)
[Manatee DNS June 2012 to June 2017 LOA.docx](#)
[TLPZ Manatee Taxon.pdf](#)
[TLPZ Research Policies and Procedures 2010 \(2\).docx](#)

Hi Jim,

I have attached the documentation for Lowry Park Zoo's LOA renewal. Thank you.

Sincerely,
Virginia

Virginia Edmonds
Animal Care Manager of Florida Mammals / Dive Safety
Tampa's Lowry Park Zoo
1101 West Sligh Avenue
Tampa, Florida 33714
813-935-8552 ext 273
Lowryparkzoo.org
Virginia.edmonds@lowryparkzoo.org



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

Leeann Rottman <Leeann.Rottman@zootampa.org>
To: "Barry, Anna" <anna_barry@fws.gov>, Joe Couceiro <Joe.Couceiro@zootampa.org>

Wed, Feb 13, 2019 at 4:13 PM

Hi Ms. Barry,

We have had some changes to our staff since we submitted our LOA application 2 years ago. I will get you these changes and resumes by tomorrow.

Thank You,

Lee Ann Rottman

Vice President, Conservation

ZooTampa at Lowry Park

1101 West Sligh Ave

Tampa, FL 33602

(813) 935-8552 ext 5221

C (813) 695-2135

leeann.rottman@zootampa.org



Consider the environment;

Think before you print!



[Quoted text hidden]



Barry, Anna <anna_barry@fws.gov>

ZooTampa files - provided Aug 2017 as part of permit renewal process

Teresa Calleson <teresa_calleson@fws.gov>
To: Anna Barry <anna_barry@fws.gov>
Cc: Jay Herrington <Jay_Herrington@fws.gov>

Wed, Feb 13, 2019 at 12:41 PM

Here you go...let me know if you need me to track down anything else. Virginia Edmonds originally sent the info for ZooTampa...she is no longer working at the zoo and has taken a position at South Florida Museum. So, if we need additional information, I can followup with LeeAnn Rottman.

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200











Jacksonville, Florida 32256-7517


904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

13 attachments

-  **Veterinary Hospital Resumes.zip**
154K
-  **Case Summary on Manatee DNS LOA June 2012 to June 2017.docx**
227K
-  **Florida Mammals resumes.zip**
154K
-  **LOA application documentation 6.22.docx**
1178K
-  **Manatee DNS June 2012 to June 2017 LOA.docx**
20K
-  **Manatee Program description 2017 (002).doc**
220K
-  **Request Form for LOA v 3-1-17 (002).docx**
23K
-  **TLPZ LOA 2017 Contents.pdf**
18K
-  **TLPZ Manatee Taxon.pdf**
18K
-  **TLPZ Research Policies and Procedures 2010 (2).docx**
549K

 **USDA license.pdf**
41K

 **USDA report October 2016.pdf**
35K

 **20170622_em_TLPZ VE to FWS JAV TLPZ LOA Applic.pdf**
2557K



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

1 message

Barry, Anna <anna_barry@fws.gov>

Wed, Feb 13, 2019 at 2:58 PM

To: Joe Couceiro <Joe.Couceiro@zootampa.org>, Leeann Rottman <leeann.rottman@zootampa.org>

Dear Mr. Couceiro,

When your application was originally submitted, you provided the resumes/qualification for the people mentioned below. Since at this time Dr. Ball cannot engaged in activities with manatees, please confirm if the list is still current. If the list is not current, please update it and provide the qualification and experience of anyone not mentioned below [see application 3-200-43 (attached) starting on page 17, question #37: Verifier (b), Rescuer (b), Transporter (b), Critical Care Facility (b), and Rehabilitation/Holding Facility for more details].

Verifiers

- Dr. Lauren Smith
- Dr. Melissa Nau
- Virginia Edmonds
- Jennifer Galbraith
- Jaime Vaccaro
- Molly Lippincott
- Lisa Smith
- Kelly Nazario
- Amanda Wininsky

Rescuer

- Dr. Lauren Smith
- Dr. Melissa Nau
- Virginia Edmonds
- Jennifer Galbraith
- Jaime Vaccaro
- Molly Lippincott
- Lisa Smith
- Kelly Nazario
- Amanda Wininsky

Transporters

- Dr. Lauren Smith
- Dr. Melissa Nau
- Virginia Edmonds
- Jennifer Galbraith
- Jaime Vaccaro
- Molly Lippincott
- Lisa Smith
- Kelly Nazario
- Amanda Wininsky

Critical Care Facilities

- Dr. Lauren Smith
- Dr. Melissa Nau
- Virginia Edmonds
- Jennifer Galbraith
- Jaime Vaccaro
- Molly Lippincott
- Lisa Smith
- Kelly Nazario

- Amanda Wininsky

Rehabilitation/Holding Facility

- Dr. Lauren Smith
- Dr. Melissa Nau
- Virginia Edmonds
- Jennifer Galbraith
- Jaime Vaccaro
- Molly Lippincott
- Lisa Smith
- Kelly Nazario
- Amanda Wininsky

Sincerely,


Anna Barry
Supervisory Policy Specialist
USF S/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

Please be aware that we process application on a first come first serve basis and due to the number of applications we receive some delays are unavoidable.

We do not accept applications via fax or e-mail.

Sign up for our e-newsletter to learn how we're working around the globe to protect species and their habitats!



 **3-200-43_take_import_export_marine_mammal.pdf**
1258K

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

A. For **VERIFIERS** of live, distressed manatees:

1. If staff received any training from the Florida Fish and Wildlife Conservation Commission (FWC) and/or other LOA holders, describe when and where training occurred, which organization provided the training, types of training and other relevant information

Tampa's Lowry Park Zoo Manatee Critical Care Center staff and Veterinary Team have partnered with FWC for 20 years. TLPZ, at the request of FWC, will respond to reports of injured and distressed live manatees to verify their condition. FWC may make decisions to rescue based on the reports

2. Describe the qualifications of each member in your organization that demonstrates their ability to verify the condition of reported, live, distressed manatees (including any work and/or volunteer experience that describes where, with what authorized organization, an approximate number of hours, approximate number of verifications, and other relevant experience). Resumes, CVs, and other supporting documents may be used to describe qualifications.

*The current **Veterinary team** at Lowry Park Zoo has a combined 20 years of providing veterinary care of *Trichechus manatus latirostris* during rescue, critical care, recovery, release, **monitoring** and other related health care activities. The vast majority of this has occurred at Lowry Park Zoo but also includes activities at Homosassa Springs, Mote Marine, and other facilities.*

Ray Ball, DVM

Director of Medical Sciences

- *7 years performing the above job duties as Director of Medical Sciences at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, medically directed the rehabilitation of 207 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *7 years as acting Veterinarian for long term captive manatees at Homosassa Springs Wildlife Park, Homosassa, Florida*

Lauren Smith, DVM

Associate Veterinarian

- *2 years performing the above job duties as Associate Veterinarian at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *1 year of clinical work as an Aquatic Animal Health Intern for the University of Florida. Included medical management of rehabilitating manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center and marine mammal response/transport, manatee health assessments, necropsy, and independent research at the FWC Marine Mammal Pathobiology Lab*
- *To date, medically directed the rehabilitation of 47 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Verifiers cont'd

Melissa Nau, DVM

Veterinary Public Health Fellow

- 1 year performing the above job duties as the Veterinary Public Health Fellow at Tampa's Lowry Park Zoo Manatee Critical Care Center
- To date, assisted with the rehabilitation of 20 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center

Basic husbandry of Trichechus manatus latirostris in the Zoo's Manatee Critical Care Center includes verifying, rescue, transport, medical treatment, observation, data collection, morphometrics, diet management, feeding, restraint, water quality, release, post release monitoring and post release health assessments.

Virginia Edmonds

Animal Care Manager of Florida Mammals

- 7 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center as an Animal Care Associate, Animal Care Professional and Senior Animal Care Professional
- 15 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center as Animal Care Manager
- To date, directed the rehabilitation of 419 injured or distressed manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center

Jennifer Galbraith

Senior Animal Care Professional

- 14 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center
- To date, has assisted with the rehabilitation of 333 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center
- 9 months as a volunteer at Tampa's Lowry Park Zoo Manatee Critical Care Center

Jaime Vaccaro

Senior Animal Care Professional

- 9 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center
- To date, has assisted with the rehabilitation of 257 manatees
- 9 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center

Molly Lippincott

Senior Animal Care Professional

- 8 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Verifiers cont'd

Lisa Smith

Animal Care Professional

- *5 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *3 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Kelly Nazario

Animal Care Associate

- *Florida Fish and Wildlife Conservation Commission Intern. Four month internship (March 2011 to May 2011) with the Southwest Florida Field Station assisting with verifying, rescuing, transport, photo ID and necropsy.*
- *2 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Amanda Wininsky

- *10 years full-time as a Senior Animal Care Professional at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *3 years performing the above job duties as an Occasional Animal Care Associate at Tampa's Lowry Park Zoo Manatee Critical Care Center*

3. **Describe numbers and types of: vehicles (cars, trucks, boats, etc.) that will be used to travel to/from locations of reported, live, distressed manatees; communications devices that will be used to communicate with rescue responders (phones, radios, etc.); and any other related equipment.**

Tampa's Lowry Park Zoo uses a Ford F-150 truck or a Ford Explorer to travel to and from locations of reported live, distressed manatees. We use personal cell phones to relay information about the manatee to rescue responders.

4. **Provide a statement that you will be available to respond to reports of live, distressed manatees when needed.**

At the request/authorization of FWC or as the result of a complainant report, all staff are available to verify a live, distressed manatee.

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

B. For **RESCUERS** of live, distressed manatees:

Rescuers must meet U.S Department of Agriculture (USDA) standards for Humane Handling, Care, Treatment, and Transportation of Marine Mammals when rescuing live animals. See Attachment 1.

- 5. If staff members received any training from the Florida Fish and Wildlife Conservation Commission (FWC) and/or other LOA holders, describe when and where training occurred, which organization provided the training, types of training, and other relevant information.**

Tampa's Lowry Park Zoo Manatee Critical Care Center staff and Veterinary Team have partnered with FWC for 20 years. TLPZ will accompany and assist FWC in the rescue of injured and distressed live manatees.

- 6. Describe the qualifications of each member in your organization that demonstrates their ability to rescue distressed manatees (including any work and/or volunteer experience that describes where, with what authorized organization, an approximate number of hours, approximate number of rescues, and other relevant experience). Resumes, CVs, and other supporting documents may be used to describe qualifications.**

*The current **veterinary team** at Lowry Park Zoo has a combined 20 years of providing veterinary care of *Trichechus manatus latirostris* during **rescue**, critical care, recovery, release, monitoring and other related health care activities. The vast majority of this has occurred at Lowry Park Zoo but also includes activities at Homosassa Springs, Mote Marine, and other facilities.*

Ray Ball, DVM

Director of Medical Sciences

- 7 years performing the above job duties as Director of Medical Sciences at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- To date, medically directed the rehabilitation of 207 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- 7 years as acting Veterinarian for long term captive manatees at Homosassa Springs Wildlife Park, Homosassa, Florida*

Lauren Smith, DVM

Associate Veterinarian

- 2 years performing the above job duties as Associate Veterinarian at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- 1 year of clinical work as an Aquatic Animal Health Intern for the University of Florida. Included medical management of rehabilitating manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center and marine mammal response/transport, manatee health assessments, necropsy, and independent research at the FWC Marine Mammal Pathobiology Lab*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Rescuers cont'd

- *To date, medically directed the rehabilitation of 47 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Melissa Nau, DVM

Veterinary Public Health Fellow

- *1 year performing the above job duties as the Veterinary Public Health Fellow at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, assisted with the rehabilitation of 20 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

*Basic husbandry of Trichechus manatus latirostris in the zoo's Manatee Critical Care Center includes **verifying**, rescue, transport, medical treatment, observation, data collection, morphometrics, diet management, feeding, restraint, water quality, release, post release monitoring and post release health assessments.*

Virginia Edmonds

Animal Care Manager of Florida Mammals

- *7 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center as an Animal Care Associate, Animal Care Professional and Senior Animal Care Professional*
- *15 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center as Animal Care Manager*
- *To date, directed the rehabilitation of 419 injured or distressed manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Jennifer Galbraith

Senior Animal Care Professional

- *14 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, has assisted with the rehabilitation of 333 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *9 months as a volunteer at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Jaime Vaccaro

Senior Animal Care Professional

- *9 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, has assisted with the rehabilitation of 257 manatees*
- *9 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Molly Lippincott

Senior Animal Care Professional

- *8 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Rescuers cont'd

Lisa Smith

Animal Care Professional

- 5 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center
- 3 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center

Kelly Nazario

Animal Care Associate

- Florida Fish and Wildlife Conservation Commission Intern. Four month internship (March 2011 to May 2011) with the Southwest Florida Field Station assisting with verifying, rescuing, transport, photo ID and necropsy.
- 2 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center

Amanda Wininsky

- 10 years full-time as a Senior Animal Care Professional at Tampa's Lowry Park Zoo Manatee Critical Care Center
- 3 years performing the above job duties as an Occasional Animal Care Associate at Tampa's Lowry Park Zoo Manatee Critical Care Center

7. Describe how you meet or exceed USDA standards. Include a description of:

- a. The number and types of: vehicles (cars, trucks, boats, etc.) that will be used to support the rescue of distressed manatees; rescue equipment (nets, stretchers, etc.) that will be used for rescues; communications devices that will be used during rescues (phones, radios, etc.); and any other related equipment.**

- TLPZ is a secondary source for rescues with FWC being the primary
- If assisting with a rescue, TLPZ will bring stretchers to suit the size of the manatee (Image 1)
- If TLPZ is transporting a rescued manatee on behalf of FWC, the zoo will rent a box truck with a pass-through door, air conditioning/heat and a pull out ramp from Enterprise commercial trucks (Image 2).

Description of rental vehicle:

- Up to 5,000 lbs. payload
 - Pullout ramp
 - Cab/cargo access door
 - Rear roll-up door
 - Air conditioning/heat
 - Dimensions: Length 15' , Width 96" , Height 84"
- During transport, the staff will communicate through the pass through door and will use cell phones to communicate to zoo staff on rescue progress and transport

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Rescuers cont'd

- 8. Provide a statement that you will be available to respond to reports of live, distressed manatees when needed**

*Tampa's Lowry Park Zoo Manatee Critical Care Center staff and the Veterinary Team are available to at the request/authorization of FWC or as the result of a complainant report, all staff are available to **respond** to a live, distressed manatee.*

C. For **TRANSPORTERS** of live, distressed manatees

- Transporters must meet USDA standards for Humane Handling, Care, Treatment, and Transportation of Marine Mammals when transporting live animals. See Attachment 1. Transports must also be consistent with Animal Welfare Act requirements for transportation and USFWS transport regulations. See Attachments 2 and 3.

- 9. If staff members received any training from the Florida Fish and Wildlife Conservation Commission (FWC) and/or other LOA holders, describe when and where training occurred, which organization provided the training, types of training, and other relevant information.**

Tampa's Lowry Park Zoo Manatee Critical Care Center staff and Veterinary Team have partnered with FWC for 20 years. TLPZ, at the request of FWC, will assist in the transport of injured and distressed, live manatees for rescue and as a trained facility, will transport for a transfer or release.

- 10. Describe the qualifications of each member in your organization that demonstrates their ability to transport, accompany, and support manatees (including any work and/or volunteer experience that describes where, with what authorized organization, an approximate number of hours, approximate number of transports, and other relevant experience). Resumes, CVs, and other supporting documents may be used to describe qualifications.**

*The current **veterinary team** at Lowry Park Zoo has a combined 20 years of providing veterinary care of *Trichechus manatus latirostris* during rescue, critical care, recovery, release, monitoring and other related health care activities. The vast majority of this has occurred at Lowry Park Zoo but also includes activities at Homosassa Springs, Mote Marine, and other facilities.*

Ray Ball, DVM

Director of Medical Sciences

- *7 years performing the above job duties as Director of Medical Sciences at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, medically directed the rehabilitation of 207 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *7 years as acting Veterinarian for long term captive manatees at Homosassa Springs Wildlife Park, Homosassa, Florida*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Transporters cont'd

Lauren Smith, DVM

Associate Veterinarian

- *2 years performing the above job duties as Associate Veterinarian at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *1 year of clinical work as an Aquatic Animal Health Intern for the University of Florida. Included medical management of rehabilitating manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center and marine mammal response/transport, manatee health assessments, necropsy, and independent research at the FWC Marine Mammal Pathobiology Lab*
- *To date, medically directed the rehabilitation of 47 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Melissa Nau, DVM

Veterinary Public Health Fellow

- *1 year performing the above job duties as the Veterinary Public Health Fellow at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, assisted with the rehabilitation of 20 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Basic husbandry of *Trichechus manatus latirostris* in the zoo's Manatee Critical Care Center includes verifying, rescue, **transport**, medical treatment, observation, data collection, morphometrics, diet management, feeding, restraint, water quality, release, post release monitoring and post release health assessments.

Virginia Edmonds

Animal Care Manager of Florida Mammals

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Senior Animal Care Professional

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- *9 months as a volunteer at Tampa's Lowry Park Zoo Manatee Critical Care Center*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Transporters cont'd

Jaime Vaccaro

Senior Animal Care Professional

- 9 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center
- To date, has assisted with the rehabilitation of 257 manatees
- 9 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center

Molly Lippincott

Senior Animal Care Professional

- 8 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center

Lisa Smith

Animal Care Professional

- 5 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center
- 3 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center

Kelly Nazario

Animal Care Associate

- Florida Fish and Wildlife Conservation Commission Intern. Four month internship (March 2011 to May 2011) with the Southwest Florida Field Station assisting with verifying, rescuing, transport, photo ID and necropsy.
- 2 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center

Amanda Wininsky

- 10 years full-time as a Senior Animal Care Professional at Tampa's Lowry Park Zoo Manatee Critical Care Center
- 3 years performing the above job duties as an Occasional Animal Care Associate at Tampa's Lowry Park Zoo Manatee Critical Care Center

11. Describe how you meet or exceed USDA standards. Include a description of:

- a. Number and types of: vehicles (trucks, boats, airplanes, etc.) that will be used to transport manatees; shipping containers that will be used to transport manatees (including type, construction, dimensions, and weight); other equipment that will be used in the transport of manatees (foam pads, water sprayers, stretchers, etc.); communications devices that will be used during transports (phones, radios, etc.); and any other related equipment.
- b. How manatees will be taken care of during transport (number of attending staff, etc)

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Transporters cont'd

- *Manatees arriving or leaving the Critical Care Center are transported using the FWCC Marine Mammal Pathobiology Lab or Southwest Florida Field Station manatee rescue truck (**Image 1**).*
- *When the truck is unavailable, the zoo will rent the same truck with a pass-through door, air conditioning/heat and a pull out ramp from Enterprise commercial trucks (**Image 2**).*

Description of rental vehicle:

- *Up to 5,000 lbs. payload*
 - *Pullout ramp*
 - *Cab/cargo access door*
 - *Rear roll-up door*
 - *Air conditioning/heat*
 - *Dimensions: Length 15' , Width 96" , Height 84"*
-
- *Depending on the release location, manatees are transported anywhere from 1 to 5 hours. This is from point of rescue or to the release site.*
 - *To date, no more than two manatees have ever been transported together in a single truck. These cases have been cow and calf or manatees no greater than 250 cm*
 - *Manatees are transported on closed cell and open cell foam (**image 3**) for support and safety*
 - *Water sprayers (**image 4**) are used for body temperature control.*
 - *Temperatures can be taken with thermometers (**image 5**)*
 - *Moving straps are used to adjust the position of the manatee if needed (**image 6**)*
 - *No less than five people accompany the manatee in the truck. They include the driver with the remaining staff in the truck box monitoring the animal*
 - *A chase/additional vehicle (**Image 7**) follows the transport truck in the event of break down or needed assistance with the manatee. This vehicle may contain up to 5 or more additional staff based on the size of the manatee in transport*
 - *The pass-through door (**Image 1 A**) provides face to face communication with the truck driver and cell phones are used to communicate with the chase vehicle or in case of emergency to call for outside assistance*
 - *Stretchers (**Image 8**) are used to move the manatee into the truck and they remain in the truck to be used at the release site*

Image 1: FWC Manatee Transport Truck



TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Transporters cont'd

12. Provide a statement that you will be available to transport manatees when needed.

- *Tampa's Lowry Park Zoo Manatee Critical Care Center staff and the Veterinary Team are available to transport manatees for a rescue, transfer or release when needed*



Image 1A: *Pass-through door to cab*



Image 2: *Commercial Rental Vehicle*



Image 3: *Closed and Open Cell Foam*



Image 4: *Water Sprayers*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Transporters cont'd



Image 5: Thermometer



Image 6: Moving Straps



Image 7: Chase Vehicle



Image 8: Stretchers



TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

D. For manatee **Critical Care Facilities:**

Critical care facilities must meet or exceed USDA standards for Humane Handling, Care, Treatment, and Transportation of Marine Mammals when maintaining, treating, and holding live animals. See Attachment 1.

13. Provide descriptions of the qualifications of each member in your organization that demonstrates their ability to care for, handle, and maintain manatees (including any work and/or volunteer experience that describes where, with what authorized organization, an approximate number of hours, approximate number of animals, and other relevant experience). Resumes, CVs, and other supporting documents may be used to describe qualifications.

*The current **veterinary team** at Lowry Park Zoo has a combined 20 years of providing veterinary care of *Trichechus manatus latirostris* during rescue, **critical care**, recovery, release, monitoring and other related health care activities. The vast majority of this has occurred at Lowry Park Zoo but also includes activities at Homosassa Springs, Mote Marine, and other facilities.*

Ray Ball, DVM

Director of Medical Sciences

- *7 years performing the above job duties as Director of Medical Sciences at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, medically directed the rehabilitation of 207 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *7 years as acting Veterinarian for the long term captive manatees at Homosassa Springs Wildlife Park, Homosassa, Florida*

Lauren Smith, DVM

Associate Veterinarian

- *2 years performing the above job duties as Associate Veterinarian at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *1 year of clinical work as an Aquatic Animal Health Intern for the University of Florida. Included medical management of rehabilitating manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center and marine mammal response/transport, manatee health assessments, necropsy, and independent research at the FWC Marine Mammal Pathobiology Lab*
- *To date, medically directed the rehabilitation of 47 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Melissa Nau, DVM

Veterinary Public Health Fellow

- *1 year performing the above job duties as the Veterinary Public Health Fellow at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, assisted with the rehabilitation of 20 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Critical Care Facilities cont'd

*Basic husbandry of Trichechus manatus latirostris in the zoo's Manatee Critical Care Center includes verifying, rescue, transport, **medical treatment, observation**, data collection, morphometrics, diet management, feeding, restraint, water quality, release, post release monitoring and post release health assessments.*

Virginia Edmonds

Animal Care Manager of Florida Mammals

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- *15 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center as Animal Care Manager*
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Jennifer Galbraith

Senior Animal Care Professional

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- *To date, has assisted with the rehabilitation of 333 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *9 months as a volunteer at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Jaime Vaccaro

Senior Animal Care Professional

- *9 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *To date, has assisted with the rehabilitation of 257 manatees*
- *9 months as an intern at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Molly Lippincott

Senior Animal Care Professional

- *8 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Lisa Smith

Animal Care Professional

- *5 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*
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TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Critical Care Facilities cont'd

Kelly Nazario

Animal Care Associate

- *Florida Fish and Wildlife Conservation Commission Intern. Four month internship (March 2011 to May 2011) with the Southwest Florida Field Station assisting with verifying, rescuing, transport, photo ID and necropsy.*
- *2 years performing the above job duties at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Amanda Wininsky

- *10 years full-time as a Senior Animal Care Professional at Tampa's Lowry Park Zoo Manatee Critical Care Center*
- *3 years performing the above job duties as an Occasional Animal Care Associate at Tampa's Lowry Park Zoo Manatee Critical Care Center*

14. For authorization as a critical care facility, you must have a qualified, critical care veterinarian.

- *See attached Veterinarian resume*

15. Describe how you meet or exceed USDA standards. Include a description of:

a. Critical Care and holding areas, including descriptions of holding tanks. The description should include photographs, drawings, and/or diagrams illustrating the area(s) and facility (or facilities) where the manatees will be held. When describing holding tanks, include tank dimensions (tank length, width, depth, water volume); describe pumps and filtration systems (including type and capacity and other relevant information); describe lifting apparatus; water heaters (including degree to which tanks can be heated); describe water source and type (and ability to use freshwater, saltwater and/or both); and any other relevant features.

Tampa's Lowry Park Zoo Manatee Critical Care Center opened in 1991 and has since rehabilitated and released 237 manatees. The Center consists of three strictly freshwater medical pools that are 6 meters in diameter and 2.4 meters deep. Each pool has a capacity to hold 16,000 gallons of water and is equipped with an electric moveable floor. The floor is used to dry-dock manatee patients for treatments, surgical procedures, and health assessments. It can also provide varying water depths for individual patient needs. The floors are an aluminum based frame with IPE wood boards. Of the three medical pools, one can be isolated. It has its own filtration and heating/cooling system. (see image 9)

Once animals are in recovery, they may move to a 75,000 gallon or 125,000 gallon, strictly freshwater habitat. The smaller pool measures 17 meters long x 11 meters wide x 2.4 meters deep and the larger pool is 23 meters long x 11 meters wide x 4 meters deep. These pools run on shared filtration with the three medical pools. There are six-1000 gallon per minute sand filters each with a 20 horsepower motor. This arrangement of pools also has its own heating system with thermostat

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Critical Care Facilities cont'd

All water is sanitized with ozone. Pools are maintained at the lowest temperature of 72° F in the winter (October-May) acclimating manatees for winter release. The water temperature follows the ambient air temperature the remainder of the year (May-September) averaging around 85-87° F. (see image 10)

b. The maximum number of manatees that can be housed at your facility.

The David A Straz Jr., Critical Care Center has ability to hold up to 20 manatees and remain within USDA compliance for both horizontal and vertical space and water quality

c. The current distribution and number of manatees by holding tank at your facility (include sex, age [if known], time in captivity, size class, calves, etc.)

- *See attached: TLPZ taxon report*

d. All manatee deaths, if any, at your facility within the past five years and the steps taken to prevent them.

- *See the attached report: Manatee DNS and Manatee DNS case summary*

16. Provide a copy of 1) your USDA Animal and Plant Health Inspection Service (APHIS) Animal Welfare Act (AWA) license; 2) your most recent APHIS inspection report.

- *See attached: USDA license and APHIS inspection report*

17. If research (consistent with that authorized in Permit No. MA 77019-5 or otherwise permitted) is conducted on captive and released manatees, provide a copy of 1) USDA/APHIS AWA Certification for Research Facilities; 2) IACUC approvals for research conducted at your facility; and, as appropriate 3) a copy of other permit(s) to conduct manatee research at your facility.

- *See attached: TLPZ Research Policies and Procedures*

18. Provide a statement that you will be available to maintain, care for, and house manatees when needed, including round the clock veterinary care.

- *Tampa's Lowry Park Zoo, the Veterinary team and the husbandry team are available to maintain, care for, and house manatees with round the clock care, as needed*

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

E. For manatee ***Holding Facilities:***

Holding Facilities must meet USDA standards for humane handling, care, treatment and transportation of Marine Mammals when holding live animals.

19. Provide descriptions of the qualifications of each member in your organization that demonstrates their ability to care for, handle, maintain manatees (including any work and/or volunteer experience that describe where, with what authorized organization an approximate number of hours approximate number of animals and other relevant experiences). Resumes, CV's and other supporting documents may be used to describe qualifications.

*The current **veterinary team** at Lowry Park Zoo has a combined 20 years of providing veterinary care of *Trichechus manatus latirostris* during rescue, critical care, recovery, release, monitoring and other related health care activities. The vast majority of this has occurred at Lowry Park Zoo but also includes activities at Homosassa Springs, Mote Marine, and other facilities.*

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TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Holding Facilities cont'd

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TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Holding Facilities cont'd

Kelly Nazario

Animal Care Associate

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- *3 years performing the above job duties as an Occasional Animal Care Associate at Tampa's Lowry Park Zoo Manatee Critical Care Center*

20. For authorization as a critical care facility, you must have a qualified, critical care veterinarian.

- *see attached Veterinarian resume and CV*

21. Describe how you meet or exceed USDA standards. Include a description of:

a. Holding areas, including descriptions of holding tanks. The description should include photographs, drawings, and/or diagrams illustrating the area(s) and facility (or facilities) where the manatees will be held. When describing holding tanks, include tank dimensions (tank length, width, depth, water volume); describe pumps and filtration systems (including type and capacity and other relevant information); describe lifting apparatus; water heaters (including degree to which tanks can be heated); describe water source and type (and ability to use freshwater, saltwater and/or both); and any other relevant features.

Tampa's Lowry Park Zoo Manatee Critical Care Center opened in 1991 and has since rehabilitated and released 237 manatees. The Center consists of three strictly freshwater medical pools that are 6 meters in diameter and 2.4 meters deep. Each pool has a capacity to hold 16,000 gallons of water and is equipped with an electric moveable floor. The floor is used to dry-dock manatee patients for treatments, surgical procedures, and health assessments. It can also provide varying water depths for individual patient needs. The floors are an aluminum based frame with IPE wood boards. Of the three medical pools, one can be isolated. It has its own filtration and heating/cooling system. (Image 9)

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017



Image 9: Heater and chiller unit for medical pool 1

Once animals are in recovery, they may move to a 75,000 gallon or 125,000 gallon, strictly freshwater habitat. The smaller pool measures 17 meters long x 11 meters wide x 2.4 meters deep and the larger pool is 23 meters long x 11 meters wide x 4 meters deep. These pools run on shared filtration with the three medical pools. There are six-1000 gallon per minute sand filters each with a 20 horsepower motor. This arrangement of pools also has its own heating system with thermostat. All water is sanitized with ozone. Pools are maintained at the lowest temperature of 72 °F in the winter (October-May) acclimating manatees for winter release. The water temperature follows the ambient air temperature the remainder of the year (May-September) averaging around 85-87 °F. (Image 10)



Image 10: Heating unit for the recovery pools and medical pools 2 and 3

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Holding Facilities cont'd

b. the maximum number of manatees that can be housed at your facility

- *The David A Straz Jr., Critical Care Center has ability to hold up to 20 manatees and remain within USDA compliance for both horizontal and vertical space and water quality*

c. the current distribution of manatee and number of manatees by holding tank at your facility (include sex, age, time in captivity, size class, calves, etc)

- *See attached: **taxon report***

d. all manatee deaths, if any, at your facility within the past five years and the steps taken to prevent them

- *See attached report: **TLPZ Manatee DNS and Case Summary of Manatee DNS***

22. provide a copy of 1) your USDA, APHIS, AWA license; 2) your most recent APHIS inspection report

- *See attached: **USDA license and APHIS inspection report***

23. If research (consistent with that authorized in Permit No. MA 77019-5 or otherwise permitted) is conducted on captive and released manatees, provide a copy of 1) USDA/APHIS AWA Certification for Research Facilities; 2) IACUC approvals for research conducted at your facility; and, as appropriate 3) a copy of other permit(s) to conduct manatee research at your facility.

- *See attached: **TLPZ Research Policies and Procedures***

24. In the event that rehabilitating manatees will incidentally be on public display, provide information to show that your facility:

- a. **is open to the general public without limitations or restrictions (other than by the charging of an admission fee); and**
- b. **offers a program for education or conservation purposes that is based on professionally recognized standards of the public display community; and**
- c. **promotes manatee and manatee habitat conservation.**

The David A. Straz Jr., Critical Care Center is open to guests of Tampa's Lowry Park Zoo. Guests can purchase daily admission tickets (an adult is \$32.95 and child for \$24.95) or an annual pass (ranging from \$79-\$159) which gives them access to view the Critical Care Center. The zoo is open from 930 to 1700 daily with the exception of Thanksgiving and Christmas. The Critical Care Center, including the medical and recovery pools, is a part of the guest viewing. The view of the medical pools is above ground only but provides opportunities to see Animal Care staff performing medical procedures, health assessments and the transport of incoming and outgoing patients. There is a daily educational interaction with guests at 1330 which includes a discussion of the Critical Care Center and how manatees come to be there, current manatee status and how everyone can help in manatee conservation.

TLPZ MANATEE LETTER OF AUTHORIZATION (LOA) RENEWAL 2017

Holding Facilities cont'd

The two recovery pools allow underwater viewing of manatees that are no longer undergoing treatment, have been medically cleared and are awaiting release. The viewing is located indoors in the Manatee and Aquatic Center. The center is also host to Manatee sleepovers run through the Education Department. Groups of children and adults can camp out overnight in front of the manatee viewing windows, perform manatee related activities, and learn about manatee conservation.



Keeper speaking with summer camp attendees

*In addition, the zoo maintains a unique Florida Environmental Education Center or “Zoo School” that has educated over 1 million children and teens since 1998 with manatee specific classes including “Manatee-rific” a class where students learn all about Florida’s gentle giants and how Tampa’s Lowry Park Zoo is helping this endangered animal (**see attached program overview**)*

25. Provide a statement that you will be available to maintain and house manatees when needed.

*Tampa’s Lowry Park Zoo, the Veterinary team and the husbandry team are available to **maintain**, care for, and **house** manatees with round the clock care, as needed*

Pathology Records - Taxonomic Group Report
LOWRY PARK ZOOLOGICAL GARDEN

Criteria for Record Retrieval:

Date of Death or Biopsy: 1.Jun.2012 - 1.Jun.2017

Only records from this institution

Taxonomic group: TRICHECHUS

Manatee

Report includes the following diagnosis types:

Case # Weight	Acc. #	Sex	Date Enclosure	Age	Pathologist
2012-0097 Report 764.3 Kg (1685 Lb) LAB	103003	F	14.Jul.2012	2M 6D	Necropsy DR. JOHNSON - KISSIMMEE
2012-0098 Report 269.9 Kg (595 Lb) LAB	103016	M	12.Jul.2012 MANATEE	20D	Necropsy DR. JOHNSON - KISSIMMEE
2012-0197 Report 505.8 Kg (1115 Lb)	103026	M	11.Oct.2012	5D	Necropsy DR. TRAVIS HESKETT - KISSIMMEE
2013-0059 Report 406.0 Kg (895 Lb) ROTSTEIN	103081	M	8.Apr.2013	1D	Necropsy DAVID S.
2013-0068 Report 340.6 Kg (751 Lb) LAB	103060	F	7.Feb.2013 LPZ	2D	Necropsy DR. JOHNSON - KISSIMMEE
2013-0069 Report 133 Kg (293 Lb) LAB	103061	F	13.Mar.2013 LPZ	27D	Necropsy DR. JOHNSON - KISSIMMEE
2013-0071 Report 341.5 Kg (753 Lb) LAB	103080	M	5.Apr.2013 LPZ	2D	Necropsy DR. JOHNSON - KISSIMMEE
2013-0079 Report	103098	F	10.Jul.2013	2D	Necropsy

376.5 Kg (830 Lb)					DAVID S.
ROTSTEIN					
2013-0126	103099	F	29.Jul.2013	1D	Necropsy
Report					
274.4 Kg (605 Lb)					
2013-0150	103118	F	20.Nov.2013	20D	Necropsy
Report					
570.5 Kg (1258 Lb)			MANATEE		DAVID S.
ROTSTEIN					
2013-0184	103113	M	29.Oct.2013	15D	Necropsy
Report					
72.12 Kg (159 Lb)					DAVID S.
ROTSTEIN					
2014-0009	103121	M	23.Jan.2014	2M 15D	Necropsy
Report					
467.2 Kg (1030 Lb)			LOWRY		
2014-0038	103145	F	1.Feb.2014	0D	Necropsy
Report					
569.3 Kg (1255 Lb)					DAVID S.
ROTSTEIN					
2014-0091	103167	M	29.Apr.2014	11D	Necropsy
Report					
269 Kg (593 Lb)					DAVID S.
ROTSTEIN					
2014-0122	103174	M	4.Aug.2014	2M 14D	Necropsy
Report					
282 Kg (622 Lb)			LOWRY		
2014-0135	103195	F	16.Sep.2014	19D	Necropsy
Report					
620 Kg (1367 Lb)			LOWRY		THORA STEFFENSEN, M.D.
(TGH)					
2014-0160	103190	F	27.Oct.2014	2M 3D	Necropsy
Report					
270 Kg (595 Lb)			LOWRY		
2014-0163	103207	M	5.Nov.2014	2D	Necropsy
Report					
29.39 Kg (64.8 Lb)					CHRIS SCHILLER
(ANTECH)					
2014-0169	103097	M	20.Nov.2014	1Y 4M 14D	Necropsy
Report					
199 Kg (439 Lb)			FL15D		CHRIS
SCHILLER					

2014-0189 Report	103218	F	23.Dec.2014	0D	Necropsy
39.92 Kg (88.0 Lb) ROTSTEIN					DAVID S.
2015-0002 Report	103219	M	1.Jan.2015	2D	Necropsy
267.6 Kg (590 Lb)		MANATEE			
2015-0004 Report	103220	Unk	13.Jan.2015	0D	Necropsy
2015-0051 Report	103259	F	9.May.2015	2D	Necropsy
2015-0090 Report	103241	M	31.Mar.2015	3D	Necropsy
117 Kg (258 Lb) ROTSTEIN					DAVID S.
2016-0016 Report	103300	M	21.Jan.2016	2D	Necropsy
229.5 Kg (506 Lb) ROTSTEIN					DAVID S.
2016-0030 Report	103313	M	3.Mar.2016	3Y Est.	Necropsy
2016-0038 Report	103319	M	21.Mar.2016	1Y 0M 4D	Necropsy
300 Kg (661 Lb)					
2016-0052 Report	103320	F	27.Apr.2016	5Y 1M 6D	Necropsy
499.0 Kg (1100 Lb)		Med Tank			
2016-0058 Report	103329	F	20.May.2016	4Y 0M 19D	Necropsy
492.2 Kg (1085 Lb)					
2016-0075 Report	103334	F	15.Jun.2016	2D	Necropsy
575 Kg (1268 Lb)					
2016-0079 Report	103335	F	20.Jun.2016	5D	Necropsy
476.3 Kg (1050 Lb)					
2016-0097 Report	103342	F	27.Jul.2016	3Y 0M 26D	Necropsy
		Med Tank			
2016-0098 Report	103339	F	5.Aug.2016	5Y Est.	Necropsy

	229.1 Kg (505 Lb)		Med Tank		
2016-0099	103332	F	7.Aug.2016	1M 30D	Necropsy
Report					
	358.3 Kg (790 Lb)		Med Tank		DAVID S.
	ROTSTEIN				
2016-0105	103348	M	25.Aug.2016	5Y Est.	Necropsy
Report					
	335.7 Kg (740 Lb)		Med Tank		
2016-0122	103356	M	11.Oct.2016	1Y Est.	Necropsy
Report					
	137.9 Kg (304 Lb)		FLM POOL		
2016-0160	103364	M	21.Dec.2016	6Y 7M Est.	Necropsy
Report					
	377 Kg (831 Lb)				
2017-0002	103367	M	10.Jan.2017	1Y 0M 5D Est.	Necropsy
Report					
	116.4 Kg (257 Lb)				DAVID S.
	ROTSTEIN				
2017-0009	103371	F	16.Jan.2017	3M Est.	Necropsy
Report					
	42.64 Kg (94.0 Lb)				DAVID S.
	ROTSTEIN				
2017-0017	103357	M	30.Jan.2017	3M 20D Est.	Necropsy
Report					
	35.83 Kg (79.0 Lb)		FL15D		DAVID S.
	ROTSTEIN				
2017-0042	103377	F	21.Mar.2017	10Y Est.	Necropsy
Report					
	612.4 Kg (1350 Lb)				
2017-0066	103392	M	15.May.2017	0M Est.	Necropsy
Report					
	39.92 Kg (88.0 Lb)				



Tampa's Lowry Park Animal Research Policies and Procedures (Updated July 10, 2009)

INTRODUCTION

Tampa's Lowry Park Zoo encourages research activities that promote sound scientific inquiry, particularly that which assists in understanding the biology, management, and conservation of all taxa. This manual sets forth guidelines for all visiting scientists and student researchers

POLICIES/PROCEDURES

All visiting researchers who wish to conduct research at Tampa's Lowry Park Zoo (TLPZ) must complete a research request application and E-mail proposal that conforms to the following outline:

1. **Abstract** of no more than 300 words.
 2. **Introduction**, with sufficient background for readers without knowledge of the topic.
 3. **Objectives/Hypotheses**, outlining in short statements what the project hopes to accomplish or test.
 4. **Methods and Materials**, including sufficient schedule details, required manipulations of zoo animals, and sampling protocols to permit thorough evaluation.
 5. **Zoo involvement**, which should clearly identify TLPZ resources required including access to animals, personnel, administrative assistance, records, etc.
 6. **Results** expected at project completion and how they meet or address the objectives or support or reject the hypotheses. Include how the results will be disseminated.
 7. **References** or literature cited *and* supporting documentation (if available and appropriate) including articles, publications, tables and figures, or any other items that will facilitate project review.
 8. **Budget** and its funding source.
 9. **Permits** required to perform the research.
 10. **Timeline** projected for completion of the project.
 11. **C.V.'s** of principle investigator(s).
- Sign Tampa's Lowry Park Zoo's Release of Liability Form
 - When required by TLPZ Veterinarian, submit documentation of a tuberculosis screening within the last year and/or a tetanus shot within the last five years
 - Act in a professional manner towards zoo guests and staff
 - Wear an identification badge (provided by TLPZ) while on grounds
 - Refrain from entering off-exhibit areas and contact with animals without authorization from General Curator

- Requested information should be submitted to Lee Ann Rottman, General Curator sixty days prior to desired initiation of research

A committee consisting of VP of Animal Sciences and Conservation, General Curator, and the Director of Medical Sciences will review proposals as necessary and make recommendations to accept, decline, or accept contingent on revision of the proposal according to recommendations of the review committee. This committee may seek counsel from any reference they see appropriate to assist in evaluating the merits and feasibility of the proposal. If this committee deems appropriate, the proposal may be sent out for review to two academic advisors on a standing advisory board for TLPZ. Currently these advisors are:

- Mark Flint BVSC, BSC(HONS), MA_PPL_SC, MPHIL, PHD Director of Research- Center for Conservation- The Florida Aquarium
Research Assistant Scientist- School of Forest Resources and Conservation- University of Florida
Director- Vet-MARTI- School of Veterinary Science- The University of Queensland
- Dave Onorato, MS, PhD. Associate Research Scientist Florida Panther Project Fish and Wildlife Research Institute Florida Fish and Wildlife Conservation Commission. 298 Sabal Palm Road, Naples, Florida 34114-2572 U.S.A.
- Should your proposal be accepted, you will be notified of its category (outlined below), as well as the requirements to fulfill prior to the initiation of your research.

Level one: Request for biological materials only. Proposal and review required and a signed agreement form required (see biological request form). **Level two:** Request requiring moderate level of input and resources from TLPZ. Committee review is required. Financial recompense to zoo determined on a case by case basis. On-site TLPZ coordinator will be assigned.

Level three: Request requiring significant input and resources from TLPZ. Staff required to aid in establishment of experimental design and use of zoo resources without which the study could not be done. Financial recompense to zoo determined on a case by case basis. On-site TLPZ coordinator will be assigned.



Authorship of publications involving TLPZ staff shall be handled as follows:

Research papers: Any Zoo staff who participates in two of the following activities shall be entitled to be included as an author on any resulting publications or manuscripts (level 3 projects will require authorship be given to on-site zoo coordinator):

1. Drafting the proposal, including both writing and providing ideas and insight.
2. Conducting work or research.
3. Analyzing data.
4. Writing the paper, including internal editing and contributing to major ideas.

Essays and other non-research papers: Any Zoo staff who either contributes to developing the major themes and/or arguments of the paper or who assists in drafting the manuscript shall be entitled to be included as an author.

All authors must receive a copy of the manuscript for comment prior to publication.

Acknowledgments shall be given to the Lowry Park Zoological Society (Tampa, FL) and Tampa's Lowry Park Zoo staff who assisted with the research project (unless the staff member has been identified as an author) on any resulting publications or reports.



Within six months of last on-site visit or materials collection, researcher is required to submit two copies of the results and/or publication (or a report if not published).



Tampa's Lowry Park Animal Research Application (Updated July 10, 2009)

Applicant: _____ Date: _____
Institutional affiliation: _____ Position: _____
Address: _____
Phone/fax/e-mail: _____

Project title: [Click here to enter text.](#)

Name, affiliation, and phone number of researchers/observers other than applicant:

[Click here to enter text.](#)

Give a concise summary of the objectives of the research project (in lay terms):

[Click here to enter text.](#)

Please indicate any state or federal permits required:

[Click here to enter text.](#)

By signing this form, the applicant and all who are participating in the research project agree to abide by all rules, regulations, and requirements set forth by the Lowry Park Zoo, unless otherwise noted in writing by appropriate zoo staff.

Applicant: _____ Date: _____
Signature

Faculty advisor (Students only): _____ Date: _____
Signature



Lowry Park Zoo Scientific Review Committee:

VP Animal Science and Conservation Accept Decline Outside review
Signature/Date

General Curator Accept Decline Outside review
Signature/Date

Director of Medical Sciences Accept Decline Outside review
Signature/Date

Comments:

[Click here to enter text.](#)



Tampa's Lowry Park Research Release of Liability *(Updated July 10, 2009)*

Read carefully before signing:

I, _____, in consideration for being permitted to participate as a research participant at Tampa's Lowry Park Zoo, hereby release and discharge Tampa's Lowry Park Zoo, Lowry Park Zoological Society of Tampa, Inc., and the City of Tampa and their respective officers, directors, employees, agents, contractors, subcontractors, representatives, successors and assigns, and all persons conducting, directly or indirectly, the activities surrounding my involvement as a research participant at Lowry Park Zoo from any and all claims, rights, demands, actions, causes of action, expenses and damages, which I or my heirs, personal representative, successors, assigns or anyone claiming by, through or under me ever had, now have, or may have against the parties identified above arising from any injury, act or omission relating in any way to my participation as a research participant.

I fully understand that this Release includes, but is not limited to any claims, rights, demands, actions, causes of action, expenses and damages whatsoever which may arise from any injury, act or omission, caused, occasioned, or contributed to, actually or allegedly, by the negligence, sole or concurrent, of one or more of the parties released herein.

I also fully understand the risks involved in my participation as a research participant including, but not limited to, those risks involved with working with wild and/or endangered animals and their habitats, and fully assume said risks for any injury, losses or damages of any kind resulting from such risks, or any risks involved in associated activities.

I acknowledge that I have read, fully understand and voluntarily agree to this Release and that no oral representative, statements or inducements apart from this Release have been made to me.

Date

Signature

Date

Witness Signature



Tampa's Lowry Park Biological Materials Request

(Updated July 10, 2009)

Applicant: _____ **Date:** _____
Institutional affiliation: _____ **Position:** _____
Address: _____
Phone/fax/e-mail: _____

Project title: _____

Samples being requested: _____

Tampa's Lowry Park Zoo's terms and conditions for transfer of biological materials to applicant:

1. The samples will only be used for the purposes described in my original attached proposal (proposal shall minimally include objectives of research, intended use and shipment methods, where appropriate, of samples).
2. The samples will not be sold after project completion.
3. There may be zoonotic hazards associated with handling biological materials and I hereby release and hold harmless Tampa's Lowry Park Zoo (TLPZ), its trustees, officers, employees and agents from any and all claims, demands, actions and causes of actions whatsoever on account of any loss, damage or injury to property arising out of or in connection with any aspect of my request for biological materials from TLPZ and the transfer of, use of or exposure to zoonotic materials or on account of any other loss, damage or injury resulting from all delays, substitutions or changes in such a transfer deemed necessary or appropriate by TLPZ.
4. I will acknowledge Tampa's Lowry Park Zoo for its assistance in any publications resulting from use of provided samples.
5. I will provide Tampa's Lowry Park Zoo with two copies of any publication resulting from use of provided samples.
6. All costs of packing and shipping samples shall be borne by my institution or me.
7. I will be responsible for legal and responsible disposal of all biological specimens transferred to me in accordance with all applicable local, state and federal legislation.
8. I confirm that I have received all necessary state and federal permits required to collect and possess these materials. Copies of all applicable permits are attached to this application.

By signing this form, the applicant and all who are participating in the research project agree to abide by all rules, regulations, and requirements set forth by Tampa's Lowry Park Zoo, unless otherwise noted in writing by appropriate zoo staff.

Applicant: _____ **Signature** **Date:** _____

Return request to: Lee Ann Rottman, General Curator

Objective	To advance my career as a veterinary technician
Experience	<p>7/13-present Certified Veterinary Technician Tampa's Lowry Park Zoo Tampa, FL Member of the veterinary team responsible for the medical well-being of a wide variety of exotic animals. Responsibilities include animal care, diagnostics, procedures, and treatment as prescribed by the veterinarian with an emphasis on the clinical pathology laboratory. Perform in-house tests, maintain lab equipment, run quality control and submit samples to outside labs for specialized tests. MedARKS data entry of lab results and serum banking.</p> <p>8/10-7/13 Certified Veterinary Technician East-West Animal Hospital Lutz, FL Small animal practice seeing dogs, cats, and exotics. Specialized experience with veterinary acupuncture. Assisted with appointments & procedures. Familiar with Intravet veterinary software program, digital and dental x-rays, and Abaxis Vetscan blood & chemistry machines.</p> <p>2/05-6/10 Sales Associate Little Lambs Children's Consignment Lutz, FL Inspected items for consignment. Used computer for inventories, pricing, and pay outs. Scheduled appointments. Ran register. Processed consignments (packaged items, steamed clothes). Displayed items. Rotated stock.</p> <ul style="list-style-type: none"> • 2/90-11/98 Certified Veterinary Technician Busch Gardens Tampa, FL Primarily responsible for the laboratory. Performed CBCs, U/As, fecals (DS, float, McMasters, special stains) on a variety of exotic species. Maintained serum and tissue banks. Processed samples and submitted to outside labs. Ordered lab supplies. Entered lab results into MedARKS. Assisted veterinarians with treatments and procedures including radiographs, anesthesia, surgeries, and necropsies. Screened vet tech students for externship program. • 10/87-2/90 Veterinary Technician Sunshine A.H./Animal Eye Clinic Tampa, FL Learned basics in a small animal practice with specialized experience in ophthalmic procedures. Obtained blood and fecal samples. Analyzed samples for endoparasites and ectoparasites. Vaccinated pets. Assisted in treatments and procedures. Placed catheters. Performed dentals. Monitored anesthesia and recovery. Aided in ophthalmic exams, treatments, and surgeries. • 8/86-4/87 Manager Richway Pet World Decatur, GA Managed the pet department. Housed and maintained freshwater fish, birds, reptiles, and small mammals. Inventoried and ordered stock. Set up displays. Educated customers on pet care. Trained and supervised pet department employees. • 8/85-8/86 Floater Richway Pet World Doraville, GA Traveled to numerous Richway stores in the Atlanta area. Cared for animals. Assisted customers. • 1/85-8/85 Retail Sales Petland Lenox Atlanta, GA • 5/84-1/85 Co-Manager Petland Promenade Cincinnati, OH • 1/83-5/84 Retail Sales Petland Anglewood Cincinnati, OH • 4/82-1/83 Retail Sales Petland Northgate Cincinnati, OH • Cared for dogs, cats, small mammals, birds, reptiles, and freshwater fish. Helped customers choose the right pet and proper accessories. Operated cash register. Answered phones. Co-managed Petland Promenade and was responsible for ordering, stocking, displaying merchandise. Interviewed and hired employees. •
Education	<p>St. Petersburg Junior College, St. Petersburg, FL 1987-1989</p> <ul style="list-style-type: none"> ▪ Associate of Science, Veterinary Technology ▪ Honors: Phi Theta Kappa
Interests	Suncoast Sandpipers (volkssport club), member

References

References are available on request.

Heather Lyn Henry

(b) (6)

Education

- AS in Veterinary Technology from St. Petersburg (Junior) College, 1997; graduated with honors
- Attended University of South Florida pursuing BA in Secondary Education with a concentration in English from 1990-94
- AA in General Education from Santa Fe Community College, 1988; graduated with honors

Employment History, veterinary field (*detailed job descriptions follow*)

Veterinary Tech IV (Senior Tech) at Lowry Park Zoo, Tampa FL Dec 2011 to current

Senior Veterinary Technician at Busch Gardens, Tampa FL April 1998 to Dec 2011

Surgical Technician at Gulfcoast Veterinary Referral, Sarasota FL Dec 1998 to Aug 1999

Veterinary Technician at Bay Road Animal Hospital, Sarasota FL June 1997 to June 1998

Professional Memberships

Active member of Association of Zoo Veterinary Technicians (AZVT) since 1999

Certified with the State of Florida through the Florida Veterinary Medical Assoc. since 1997

Professional Activities

- Serve as Newsletter Editor of AZVT's quarterly newsletter October 2015 to current
- Hosted the 32nd Annual AZVT Conference at Lowry Park Zoo September 2012
- Served as Section Chair for AZVT Conference & Editing Committee, 2010 to 2013
- Served as an Assistant Editor for AZVT Conference & Editing Committee, 2008-2009
- Authored paper: "Healing the Dragon: A case study of treating a wound in a Komodo dragon (*Varanus komodoensis*)" 2010
- Presented at AZVT Annual Conference: "How to organize everything... or How to make databases your new best friend!" 2006
- Participated in two drug studies in Blue & Gold Macaws (*Ara ararauna*) while at Busch Gardens, resulting in at least one publication

Additional Employment History

Public Relations Assistant at Mote Marine Laboratory, Sarasota FL Nov 1991 to Aug 1995

Admin. Asst. & Bookkeeper II at Barnett Bank of SW FL, Sarasota FL Aug 1987 to Nov 1990

Community Activities

- Currently serve as an alternate member on the Temple Terrace River Watch Task Force
- Volunteered for Humane Society of Tampa Bay's Spay & Neuter Clinic in 2008, accruing more than 250 hours in one year
- Volunteered for Mote Marine Laboratory's Marine Mammal Stranding Program 1992-1997, logging more than 1,000 hours a year and served as co-leader of the entire volunteer program
- Volunteered for Mote Marine Laboratory's Sea Turtle Research Department 1994-1997, in tagging studies of nesting adult females and nest monitoring programs of hatchlings

Job descriptions in the veterinary field

Lowry Park Zoo

A private, not-for-profit zoological park housing a collection of more than a 1,000 exotic and endangered species under the care of two staff veterinarians. This collection included a herd of four (1 male & 3 female) adult and two (2 female) juvenile African elephants in protected contact; as well as transient native wildlife, including bears, panthers and manatees

- Primary duties: All duties associated with the care of the animals including immobilizations, anesthesia, blood and sample collection, radiographs, treatments, labwork, necropsies, etc; all record keeping, including extensive use of computer program MedARKS; coordinating veterinary aspect of all animal shipments into and out of the collection; all purchasing and inventory; processing payments related to the veterinary service; coordinating all controlled drug inventory, as well as all inspections by FL DBPR, FL DOH, USDA, etc.; coordinating the maintenance & service of all equipment in clinic.
- Secondary duties: Before the employment, or in the absence of, secondary vet(s), was primary contact for animal care staff on all medical cases, including any emergency care; all husbandry of in-clinic and/or quarantine animals when primary caretaker unavailable
- Achievements: established computerized inventory; assisted senior vet with the planning of construction of new clinic and CDC quarantine/necropsy facility; received excellent annual reviews

Busch Gardens

A private, for-profit zoological and theme park housing a collection of approx 2,000 exotic and endangered species under the care of three staff veterinarians. This collection included a herd of eight (8) female Asian elephants in both unprotected and protected contact.

- Primary duties (as the Field/Procedure technician) include: assisting with immobilizations and surgery; administering anesthesia; taking radiographs; coordinating treatments of animals both in and out of the hospital; various record keeping tasks, including extensive use of computerized medical record systems (MedARKS, EARS); and procurement of all non-lab related supplies.
- Secondary duties include: lab procedures, care and maintenance of animals in hospital and quarantine, assist with necropsies, and assist with rehab efforts of native FL wildlife.
- Achievements: computerized inventory; organized radiograph collection; appointed liaison for interactions between hospital and Zoo Education programs (tours, camps, etc.); received highest review rating available in internal review program; helped implement schedules for preventative medicine plan; teach a class to keepers on using computerized record system.

Gulfcoast Veterinary Referral

A referral/emergency practice with boarded diplomates in Internal Medicine, Radiology and Surgery started by Dr. Crispin Spencer that has since gone out of business

- Primary duties included: intake and discharge of patients, pre-surgical labwork, surgical preparation of animals, administration and monitoring of anesthesia, surgical assisting, recovery and aftercare, maintenance and sterilization of all surgical equipment, and supply requisition.
- Secondary duties included: assisting the other services and receiving emergencies.
- Achievements: received excellent remarks and increase in salary at three month anniversary.

Bay Road Animal Hospital

A private, three-office, five-doctor practice, focused on small animal care

- Primary duties included: administration of anesthesia, dental procedures, radiographs, performing labwork, surgical preparation and nursing care.
- Achievements: received excellent remarks and increase in salary at six month anniversary.

Job descriptions outside the veterinary field

Mote Marine Laboratory

A private, independent, non-profit marine research laboratory and public aquarium

- Primary duties included: assisting the output of all public communications, including a monthly 4-color newsletter, press releases, brochures and advertisements; assisting scientific programs with graphic arts and non-technical writing needs; assisting with the coordination of local and national media visits, fund-raising events, and marketing plans.
- Achievements: assisted with two national campaigns to raise awareness of the Gulf of Mexico: "The Year of the Gulf" and "The Mississippi River Project". The latter was a one day, multi-state snapshot water test of the entire river by middle school children that also involved then Vice President Al Gore.

Barnett Bank of Southwest Florida

A private bank based in the state of Florida that has since been bought by Bank of America

- Primary duties as Admin. Assist. for the Corporate Services Dept. included: coordinating special services for large dollar corporate customers, such as fund transfers, investments, and automatic deposit/debit systems; assisting sales staff in acquisition of new clients.
- Primary duties as Bookkeeper II included: all phases of central operations, such as general ledger balancing, returned checks, merchant credit card deposits, data entry and service charge assessment.

Melissa R. Nau, DVM

(b) (6)

EDUCATION

University of South Florida College of Public Health

- Concepts and Tools of Epidemiology Graduate Certificate

Tampa, FL
Sept 2016 – present

The Ohio State University College of Veterinary Medicine

Doctor of Veterinary Medicine

- *Summa Cum Laude*; Phi Zeta
- (b) (6)

Columbus, OH
May 2013

The Pennsylvania State University

B.S. in Animal Bioscience

- Schreyer Honors Scholar, Minor in Wildlife and Fisheries Sciences
- (b) (6)

University Park, PA
May 2009

University of Pretoria

Ecolife's Vets-In-The-Wild Program

Pretoria, South Africa
Jun - Jul 2008

VETERINARY EXPERIENCE

Tampa's Lowry Park Zoo and University of South Florida

Veterinary Public Health Fellow

Supervisors: Ray Ball, DVM (Tampa's Lowry Park Zoo) and Kathleen O'Rourke, Ph.D. (University of South Florida)

- Coordinate and perform preventive medicine procedures, routine annual examinations and immobilizations, and case management of the Lowry Park Zoo animal collection and native Florida wildlife hospitalized for rehabilitation
- Participate in Florida manatee health assessments, veterinary care, and rehabilitation efforts at the Lowry Park Zoo and in the wild
- Carried out a research project evaluating the use of prolactin as a pregnancy diagnostic in the Florida manatee
- Completed graduate certificate programs through the University of South Florida College of Public Health

Tampa, FL
Aug 2016 – present

Kansas State University

Zoological Medicine Service Intern

Supervisors: James W. Carpenter, MS, DVM, Dipl. ACZM and David Eshar, DVM, Dipl. ABVP, Dipl. ECZM

- Coordinate and perform preventive medicine procedures, routine annual examinations and immobilizations, and disease management of the Sunset Zoo animal collection
- Maintain veterinary records and documentation for the zoological collection at the Sunset Zoo, including weekly reports, zoo animal inventory, mortality reports, pre-shipment requirements, and preventive medicine protocols
- Participate in case management of client-owned exotic animals, including small mammal, reptile, and avian patients, seen by the service at KSU
- Manage client communication for existing and potential clients of the Zoological Medicine Service, including case assessments, diagnostic and treatment plans, and financial discussions
- Teach and assist fourth year KSU veterinary students throughout their 3-week rotation on the service
- Planned and completed a research project evaluating the pharmacokinetics of an oral and subcutaneous dose of enrofloxacin in the Caribbean flamingo (*Phoenicopterus ruber ruber*), submitted for publication

Manhattan, KS
Jun 2015 – present

National Marine Mammal Foundation

Veterinary Intern

Supervisors: Todd Schmitt, DVM (SeaWorld of California) and Jenny Meegan, DVM (National Marine Mammal Foundation)

- Completed rotations at SeaWorld of California and the Navy Marine Mammal Program

San Diego, CA
Jul 2014 – Jun 2015

Melissa R. Nau, DVM

- Participated in the management of cetacean and pinniped populations at both locations, which included preventive medicine practices, sedation and general anesthesia of California sea lions, harbor seals, and bottlenose dolphins (5 dolphin general anesthesia cases), routine sample collection and analysis, and diagnostic imaging (endoscopy, ultrasound, and radiography)
- Provided primary and supportive case management for the aquarium collection, including various species of sharks, rays, fish, and sea turtles, as well as for the avian collection, including multiple species of penguins and seabirds
- Designed and implemented a research project to monitor the reproductive cycles of a group of female white-spotted bamboo sharks and whitetip reef sharks via plasma hormone levels and ultrasonography, and presented preliminary results at an international conference

Blue Pearl Veterinary Partners

Small Animal Medicine and Surgery Intern

Supervisor: Katherine Smith, DVM, DACVECC

Brentwood, TN
Jun 2013 - Jun 2014

- Rotated through the emergency, internal medicine, critical care, and surgical services, with primary case responsibility on emergency and critical care cases
- Participated in weekly topic and case rounds, in addition to daily cage-side rounds, with the attending clinicians
- Spent an elective rotation attending the 2013 International Elephant and Rhino Symposium, followed by a rotation at the Nashville Zoo at Grassmere

Nashville Zoo at Grassmere

Veterinary Intern Volunteer

Supervisor: Heather Robertson, DVM

Nashville, TN
Sep 2013

- Monitored induction, maintenance, and recovery of general anesthesia of various captive species
- Assisted the staff veterinarians with daily case management and treatment of collection animals, including multiple species of reptiles, amphibians, tamandua, a giant anteater, bontebok, tapir, giraffe, African elephant, red panda, and a Nubian goat

Fossil Rim Wildlife Center

Veterinary Preceptor

Supervisor: Holly Haefele, DVM

Glen Rose, TX
Feb - Mar 2013

- Performed neonatal exams on newborn addax, bongo, gemsbok, and roan antelope
- Performed closed castrations on juvenile brindled wildebeest
- Monitored the induction, maintenance, and recovery from general anesthesia (chemical and inhalant) in the following species: brindled wildebeest, addra gazelle, Mexican gray wolf, giraffe, mountain zebra, and sable antelope
- Completed medical records and pathology reports using MedArks
- Assisted the veterinarians with daily medical and population management of the collection animals

SeaWorld of California

Veterinary Student Extern

Supervisor: Todd Schmitt, DVM

San Diego, CA
Oct 2012

- Completed pilot project that evaluated the absorption of glucose and protein via a nutrient enema in white-spotted bamboo sharks
- Induced, monitored, and recovered the following species during general anesthesia (chemical and inhalant): penguins, pelicans, puffins, otters, sea lions, harbor seals, Arctic foxes, hedgehogs, and sea turtles
- Observed and assisted the veterinarians with daily surgical and diagnostic procedures

Zoological Pathology Program (University of Illinois)

Veterinary Student Extern

Supervisor: Karen Terio, DVM, PhD, Dipl. ACVP

Chicago, IL
Jul 2012

- Completed retrospective evaluation of the pathogenesis of reproductive pathology in Old World primates at the Brookfield Zoo and Lincoln Park Zoo

Melissa R. Nau, DVM

- Performed gross necropsy examinations on reptiles, fish, and small mammals from the Brookfield Zoo, Lincoln Park Zoo, and Shedd Aquarium, and participated in gross and histopathology rounds

The Wilds

Veterinary Student Extern

Cambridge, OH

May - Jun 2012

Supervisor: Barbara Wolfe, DVM, PhD, Dipl. ACZM

- Monitored the maintenance of and recovery from general anesthesia in Bactrian deer, Pere David's deer, and an African wild dog
- Participated in daily animal observations and all aspects of medical management (including animal movement, deworming, regular fecal examinations, blood analysis, vaccinations, yearly examinations, and active clinical cases)

Center for Conservation and Research of Endangered Wildlife (CREW)

Cincinnati Zoo and Botanical Gardens

Cincinnati, OH

P&G Wildlife Conservation Scholar

Jun – Sep 2011

Supervisor: Monica Stoops, PhD

- Analyzed endocrine profiles from urine and saliva of Indian rhinoceroses using enzyme immunoassays
- Compared hormone profiles from saliva and urine to assess the use of saliva as the sole biological sample to monitor ovarian function in the Indian rhinoceros
- Performed rectal ultrasound examinations of the reproductive tract, collected saliva samples, and participated in artificial insemination procedures with Indian rhinoceroses

Scooby (Sociedad Protectora de Animales)

Veterinary Student Volunteer

Medina del Campo, Spain

Feb 2011

Supervisor: C. Guillermo Couto, DVM, Dipl. ACVIM

- Performed sterilization procedures on both male and female dogs; collected blood samples for serology; administered medications and completed physical exams; sutured laceration wounds; monitored anesthetic parameters during surgery
- Developed communication skills while working with non-English speaking veterinarians and students

PRE-VETERINARY EXPERIENCE

Centre Animal Hospital

Veterinary Assistant

State College, PA

Feb 2007 – Jul 2009

Supervisor: Mark Michelloti, VMD

- Stocked exam rooms and treatment room; maintained cleanliness of clinic; performed daily patient care; wrapped and sterilized surgery packs and instruments; restrained animals; assisted with radiographic imaging; performed reception duties; performed daily in-house laboratory tests

Tri-State Bird Rescue and Research

Volunteer Intern

Newark, DE

May – Aug 2008

Supervisor: Sallie Welte, VMD

- Prepared and fed diets to injured and orphaned wild birds; administered oral, topical, and subcutaneous medications; prepared husbandry for cages and enclosures; and restrained and moved birds for medical procedures

West Branch Mobile Vet Clinic

Student Volunteer

Lewisburg, PA

Jul – Aug 2007

Supervisor: Michael Popp, VMD

- Accompanied veterinarians on farm call appointments for dairy cattle, horses, and alpacas

Southern Pines Equine Associates

Student Preceptorship

Southern Pines, NC

May – Jul 2007

Supervisor: James Hamilton, DVM

- Accompanied veterinarians on farm calls and participated in clinic appointments

Melissa R. Nau, DVM

- Assisted with procedures including gastric and upper airway endoscopy, nuclear scintigraphy, shock wave therapy, digital radiography, ultrasound, lameness exams, nerve blocks, joint injection treatment, corrective dentistry, acupuncture, pre-purchase exams, and routine health maintenance

Philadelphia Zoo – Children’s Zoo

Animal Care Intern

Supervisor: Tara Routzahn

Philadelphia, PA

May – Aug 2006

- Handled, socialized, cleaned, fed, and cared for the barnyard and education collection of animals in the Children’s Zoo

PUBLICATIONS AND MANUSCRIPTS IN PROGRESS

Tucker-Mohl K, Eshar D, **Nau MR**, Biller D. Diagnostic challenge: Veiled chameleon (*Chamaeleo calytratus*) with multiple distal digital swellings. *Journal of Exotic Pet Medicine* 2016;25(2):172-174.

- DOI: <http://dx.doi.org/10.1053/j.jepm.2016.03.01>

Nau MR, Eshar D, Avni-Magen N, Kaufman E, Paz A, Roush JK. Feasibility of using commercial reagent test strips for estimation of BUN concentrations in captive black-tailed prairie dogs (*Cynomys ludovicianus*).

- Submitted to *Journal of Exotic Pet Medicine*

Nau MR, Gardiner D, Nilson E, Schmitt T, Nollens H, St. Leger J. A case of cutaneous malignant melanoma in a Haller’s round ray (*Urobatis halleri*). *Diseases of Aquatic Organisms* 2016;120(3):245-250.

- DOI: 10.3354/dao03029

Eshar D, **Nau MR**, Pohlman LM. Plasma thyroxine (T4) concentration in zoo-kept black-tailed prairie dogs (*Cynomys ludovicianus*). *Journal of Zoo and Wildlife Medicine* 2017;48(1):116-120.

- DOI: 10.1638/2016-0073.1

Nau MR, Carpenter JW, Warner M, KuKanich B. Pharmacokinetics of a single dose of oral and subcutaneous enrofloxacin in Caribbean flamingos (*Phoenicopterus ruber ruber*). *Journal of Zoo and Wildlife Medicine* 2017;48(1):72-79.

- DOI: 10.1638/2016-0049.1

Hackworth CE, Eshar D, **Nau MR**, Bagladi-Swanson M, Carpenter JW. Diagnosis and successful treatment of a potentially zoonotic dermatophytosis caused by *Microsporium gypseum* in a zoo-kept North American porcupine (*Erethizon dorsatum*).

- Accepted for publication in *Journal of Zoo and Wildlife Medicine*

Head V, Eshar D, **Nau MR**. Techniques for nonterminal blood sampling in black-tailed prairie dogs (*Cynomys ludovicianus*). *Journal of the American Association for Laboratory Animal Science* 2017;56(2):210-213.

Nau MR, Eshar D. Rostral mandibular fracture repair in a pet bearded dragon (*Pogona vitticeps*).

- Accepted for publication in *Journal of the American Veterinary Medical Association*

Heckel B, Eshar D, **Nau MR**, Naor A. Diagnostic Challenge: Facial mass in a pet veiled chameleon (*Chamaeleo calytratus*). *Journal of Exotic Pet Medicine* 2016;25(4):348-350.

- DOI: <http://dx.doi.org/10.1053/j.jepm.2016.06.005>

Nau MR, Carpenter JW, Lin D, Narayanan S, Hallman M. Mucoepidermoid carcinoma in the skull of an orange-winged Amazon parrot (*Amazona amazonica*).

- Accepted for publication in *Journal of Avian Medicine and Surgery*

Nau MR, Robeck TR, Moreng KS, Schmitt TL, Nollens HH, O’Brien JK. Diagnostic assessment of reproductive status in the white-spotted bamboo shark (*Chiloscyllium plagiosum*).

- In progress – prepared for submission to *General and Comparative Endocrinology*

Melissa R. Nau, DVM

PROFESSIONAL CONFERENCE PRESENTATIONS

International Association for Aquatic Animal Medicine Conference Apr 2015
John G. Shedd Aquarium

*Diagnostic Assessment of Reproductive Status in the White-spotted Bamboo Shark (*Chiloscyllium plagiosum*)*

- Presentation of preliminary results and abstract publication with conference proceedings

International Elephant and Rhino Symposium

Pittsburgh Zoo and PPG Aquarium

Aug 2013

*Relationship of Salivary Hormone Concentrations to Urinary Hormone Excretion Profiles in the Indian Rhinoceros (*Rhinoceros unicornis*)*

- Presentation and abstract publication with conference proceedings

ADDITIONAL PRESENTATIONS

Kansas State University College of Veterinary Medicine

Manhattan, KS

Lecturer for Advanced Exotic Pet Medicine/Zoological Medicine Course (CS 759)

Jan 2016

- Introduction to Cetacean Medicine

Kansas State University College of Veterinary Medicine

Manhattan, KS

House Officer Seminar

Nov 2015

- Pharmacokinetics of a single dose of oral and subcutaneous enrofloxacin in Caribbean flamingos (*Phoenicopterus ruber ruber*)

Kansas State University College of Veterinary Medicine

Manhattan, KS

NAVLE Review Series

Oct 2015

- Presented Exotic Animal and Poultry Medicine Review to the fourth year veterinary class

Kansas State University College of Veterinary Medicine

Manhattan, KS

Lecturer for Exotic Pet Medicine Course (CS 737)

Sept 2015

- Avian Anatomy and Physiology

Blue Pearl Veterinary Partners

Brentwood, TN

Intern Grand Rounds

May 2014

- Normal Parturition and Management of Dystocia in Small Animal Medicine

PROFESSIONAL CONFERENCES ATTENDED

American Association of Zoo Veterinarians Annual Conference

Portland, OR

The Oregon Zoo

Sept 2015

- Also attended the ACZM Ultra-Short Course

International Association for Aquatic Animal Medicine Conference

Chicago, IL

John G. Shedd Aquarium

Apr 2015

International Elephant and Rhino Symposium

Pittsburgh, PA

Pittsburgh Zoo and PPG Aquarium

Aug 2013

AWARDS AND HONORS

Kansas State University College of Veterinary Medicine

Jun 2016

Outstanding Intern Seminar Award for "Pharmacokinetics of a single dose of oral and subcutaneous enrofloxacin in Caribbean flamingos"

International Association for Aquatic Animal Medicine Conference

Apr 2015

Student Travel Award Winner

Melissa R. Nau, DVM

Phi Zeta

2012, 2013

PROFESSIONAL ORGANIZATIONS

American Association of Zoo Veterinarians

2009-2011, 2013-2017

International Association for Aquatic Animal Medicine

2014-2017

Student Chapter of the American Veterinary Medical Association

2009-2013

▪ Community Outreach Committee – Heifer International Co-Chair

American Animal Hospital Association (AAHA)

2012-2013

Melissa R. Nau, DVM

(b) (6)



RYAN O'SHEA, CVT

(b) (6)

Education

B.A.S Veterinary Technology (in progress)

-St Petersburg College School of Veterinary Technology

A.S. Veterinary Technology (2006)

-St Petersburg College School of Veterinary Technology

Experience

Tampa's Lowry Park Zoo (2015-present)

Certified Veterinary Technician

- Care of hospitalized patients; various species/taxa
- Surgical assistant, Laboratory Technician, Husbandry Specialist

St Petersburg College (2012-present)

Adjunct Faculty – School of Veterinary Technology

- Avian and Exotic Pet Medicine instructor
- Experience teaching online and face-to-face
- Supervision of veterinary technology students

Busch Gardens Tampa Bay (2007-2015)

Senior Animal Care Specialist-Hospital animal care

- Nutrition/research assistant
- Project Lead: Rising Tide Marine Reef Aquarium

AA Animal ER Center (2007-2012)

Certified Veterinary Technician

- Triage and Critical Care of emergency patients (canine/feline)
- Client education
- Website and Social Media developer

Professional Organizations

Florida Veterinary Technician Association (2006-present)

- Recording Secretary (2012-2014)
- Advisory Committee (2014-2015)

Association of Reptilian and Amphibian Veterinarians (2011-present)

- Veterinary Technician Liaison (2012-2014)

Professional Publications

Carpenter, James W. (2012-09-02). Exotic Animal Formulary. Elsevier Health Sciences

Reference #240: O'Shea R, Ball RL. Use of bovine tendon collagen for wound repair in *Varanus komodoensis*. Proc Annu Conf Assoc Rept Amph Vet; 2010: 66– 69.

Lauren Nicole Smith, D.V.M.

lauren.smith@lowryparkzoo.org

(b) (6) (C)

Education

Texas A&M University, College of Veterinary Medicine, College Station, Texas
Doctorate of Veterinary Medicine, May 2010

Sam Houston State University, Huntsville, Texas
Bachelor of Science in Biology and Minor in Chemistry, May 2006
Summa cum Laude with Highest Honors

Work Experience

Tampa's Lowry Park Zoo October 2015-present
Department of Veterinary Services Tampa, Florida

- Associate Veterinarian
- Assists head veterinarian with management and supervision long term preventative medicine program to include parasite surveillance procedures and controls, immunization, infectious diseases screening, dental prophylaxis, birth control, humane euthanasia standards, and regular physical examinations
- Implements and oversees long term quarantine program to include clinical and laboratory tests for disease
- Makes daily rounds to review health of animal collection; confers with animal keepers to obtain information about unusual animal behavior
- Examines sick or injured animals and performs necessary medical procedures including surgery, radiography, and other required treatments
- Performs necropsies, written post mortems, follow-up studies, and tests on animals in collection
- Conducts medical research relevant to health requirements of collection
- Responds to calls for emergency medical assistance
- Coordinates and supervises permanent animal marking/identification system
- Maintains medical records (MedArks) including diagnosis, prescribed medications, and other relevant data

Sitka Animal Hospital

July 2015-October 2015

- Relief Veterinarian Sitka, Alaska
- Mixed Animal Medicine and Surgery

University of Florida, College of Veterinary Medicine
Department of Large Animal Clinical Sciences
Aquatic Animal Health Division

July 2013-present
Saint Petersburg/Tampa, Florida

- Aquatic Animal Health Intern (2-year program)
Co-Directors: Michael T. Walsh, D.V.M. and Thomas B. Waltzek, D.V.M., Ph.D.
- 2nd year: The Florida Aquarium- medical and surgical management of collection animals (reptiles, amphibians, teleost, elasmobranchs, and variety of mammal species including river otters and ring-tailed lemurs), and rescue/rehabilitation of chelonians
Staff Veterinarian/Supervisor: Kathy Heym, V.M.D.
Tropical Aquaculture Laboratory- diagnostic necropsy and bacteriology, water quality, consultation with local fish farmers, aquaculture facility site visits, help teach aquaculture workshop for farmers and students
Supervisors: Roy Yanong, V.M.D. and Deborah Pouder

Work Experience, continued

- 1st year: Florida Fish and Wildlife Marine Mammal Pathology Laboratory- marine mammal response/transport, manatee health assessments, necropsy, and independent research
Supervisor: Martine de Wit, D.V.M., Dipl A.V.B.P. (Avian)
Tampa's Lowry Park Zoo- clinical work included medical management and surgery of collection animals and rehabilitation of rescued manatees
Staff Veterinarian/Supervisor: Ray L. Ball, D.V.M.
Clearwater Marine Aquarium- clinical work primarily included physical exam and medical care of cetaceans (including rehabilitation), medical management and surgery of chelonians

Madison Veterinary Hospital September 2011-June 2013

- Associate Veterinarian, Small Animal/Small Exotics Madison, Alabama
Medicine and Surgery
- Caseload included dogs, cats, small mammals, birds, and reptiles
- Practice Owner: Patrick Gorman, D.V.M.

VCA Sacramento Animal Medical Group July-September 2011

- Relief Veterinarian, General Practice and Sacramento, California
Emergency Medicine
- Medical Director: Catherine Grinstead, D.V.M.

VCA Sacramento Veterinary Referral Center July 2010-July 2011
Sacramento, California

- Small Animal Rotating Intern
- 1 year internship with rotations in Critical Care, Emergency, General Practice, Oncology, Surgery, Neurology, Cardiology, Ophthalmology, Internal Medicine and Dermatology
- Didactic training complete with daily hospital rounds, Grand Rounds presentations, Journal Club, staff clinician lectures/labs, and end-of-program Intern project presentation
- Intern Director and VCA Regional Hospital Director: Kari Moore, D.V.M., DACVECC

The Marine Mammal Center April-May 2011

- Volunteer veterinarian/Extern Sausalito, California
- Experience with husbandry, surgery, anesthesia, medical management, record-keeping and necropsy of pinnipeds; beach necropsy of humpback whale
- Staff Veterinarian: Bill Van Bonn, D.V.M.
- Supervising Veterinarians: Drs. Deborah Fauquier, D.V.M., Nicola Pussini, and Vanessa Fravel, D.V.M.

Gulf World Marine Park August 2009

- 4- week Externship Panama City Beach, Florida
- Gained experience with chelonian medicine/surgery/anesthesia
- Gained marine mammal medicine experience with bottlenose and rough-toothed dolphins including neonatal care, husbandry and rescue/rehabilitation
- Staff Veterinarian/Supervisor: Lydia Staggs, D.V.M.

Work Experience, continued

Texas A&M College of Veterinary Medicine

May 2007-August 2007

- Summer Veterinary Student Research Fellow
- Project: “Geostatistical analysis of DNA damage in oysters, *Crassostrea virginica*, in Lavaca Bay, Texas”
- Mentor: Wesley Bissett, D.V.M., Ph.D.

College Station, Texas

Harbor Branch Oceanographic Institution,
Division of Marine Mammal Research and Conservation,

May-August 2006

Ft. Pierce, Florida

- Summer Intern
- Assisted blood collection and performed in-house complete blood count/serum chemistry for health-assessment study of wild bottlenose dolphins in the Indian River Lagoon
- Research project: “Investigation into the Hematological and Biochemical Analytes of the Atlantic Bottlenose Dolphins (*Tursiops truncatus*) of the Indian River Lagoon: Comparisons of Blood Parameters and Laboratory Quality Control”
- Mentors: Gregory Bossart, V.M.D., Ph.D. and David Kilpatrick, D.V.M.

Research and Publications

Smith, LN., Waltzek, TB., Rotstein, DS., Francis-Floyd, R., Walsh, MT., Wellehan, JF., Gerhold, R., Chapman, AE, de Wit M. 2016. Disseminated toxoplasmosis *Toxoplasma gondii* in a wild Florida manatee *Trichechus manatus latirostris* and seroprevalence in two wild populations. *Diseases of Aquatic Organisms*. 122(1): 77-83.

Smith, L., de Wit, M., Rotstein D., Ball, R., Gerlach, T., Kinsel, M., Rodriguez, M. 2015. Reproductive neoplasms in wild and long-term captive female Florida manatees (*Trichechus manatus latirostris*). *Journal of Zoo and Wildlife Medicine*. 46(4):895-903.

Bissett, W., **Smith, L.,** Thompson, J., 2008. Geostatistical analysis of DNA damage in oysters, *Crassostrea virginica*, in Lavaca Bay, Texas. *Ecotoxicology*. 18:1, 69-74.

Conference Presentations

Smith, L., Ball, R. Significance of SDMA in Evaluating Renal Insufficiency in Rehabilitated Wild Florida Manatees (*Trichechus manatus latirostris*). International Association of Aquatic Animal Medicine, Virginia Beach, Virginia.

Smith, L., Heym, K., Yanong, R., Han, S. Management of a Submandibular Mass in a Gulf Flounder (*Paralichthys albigutta*). International Association of Aquatic Animal Medicine, Chicago, Illinois.

Smith, L., Gerlach, T., Arnett-Chinn, E., Maldonado, N., Ball, R. Lateral Digit Amputation at the Proximal Interphalangeal Joint in an Okapi (*Okapia johnstoni*): Surgical Technique and Outcome. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation*. October 2014.

Smith, L., de Wit, M., Rotstein, D., Ball, R., Gerlach, T., Kinsel, M., Rodriguez, M. Reproductive Neoplasms in Wild and Long-Term Captive Female Florida Manatees (*Trichechus manatus latirostris*). American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation*. October 2014.

Conference presentations, continued

Ball, R., Walsh, C., Flewelling, L., Arnett, E., **Smith, L.**, Barratclough, A., Gerlach, T. Clinical Pathology, Serum Brevetoxin and Clinical Signs of Florida Manatees (*Trichechus manatus latirostris*) during the Brevetoxin Related Event in Southwest Florida 2013. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation by R. Ball.* October 2014.

Gerlach, T., Conner, B., **Smith, L.**, Barratclough, A., Ball, R. Coagulation Profiles in Novel Species: A Research and Diagnostic Tool for Zoo and Aquatic Animal Medicine. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation by A. Barratclough.* October 2014.

Smith, L., de Wit M., Francis-Floyd, R., Walsh, M., Waltzek, T., Wellehan, J., Gerhold, R., Su, C., Chapman, A. Disseminated Toxoplasmosis and Serologic Survey for *Toxoplasma gondii* in the Wild Florida Manatee (*Trichechus manatus latirostris*). 39th Annual Eastern Fish Health Workshop. Shepherdstown, West Virginia. *Oral Presentation.* May 2014.

Flanagan, J., **Smith, L.**, Clubb, F. Hypertrophic Cardiomyopathy with Congestive Heart Failure in an Eastern Lowland Gorilla. American Association of Zoo Veterinarians Annual Conference, Tulsa, Oklahoma. *Cardiovascular Pathology Workshop Oral Presentation given by L. Smith.* October 2009.

Smith, L., Flanagan J., Smith, L., Clubb, F. Hypertrophic Cardiomyopathy with Congestive Heart Failure in an Eastern Lowland Gorilla. American College of Veterinary Pathologists Annual Conference, San Antonio, Texas. *Poster Presentation.* November 2008.

Additional Training

Sarasota Dolphin Research Program
Dolphin Health Assessments

May 2014
Sarasota, Florida

- Volunteer Veterinarian
- Physical exam, patient monitoring, phlebotomy
- Coordinator: Deborah Fauquier, D.V.M., MPVM, Ph.D.

Marvet- Marine Veterinary Medicine
Mote Marine Laboratory

June 2008
Sarasota, Florida

- Two-week workshop in aquatic animal veterinary medicine
- Coordinator: Raymond Tarpley, D.V.M.

Additional Training, continued

AVMA Veterinary Leadership Experience
Washington State College of Veterinary Medicine

June 2007
Ross Point, Idaho

- Interactive curriculum designed for development of leadership skills and personal growth for veterinary students and faculty

Memberships

American Veterinary Medical Association
International Association of Aquatic Animal Medicine
American Association of Zoo Veterinarians

BPL15-02452 Local ID: 103244						
Individual	Florida manatee		Endangered (EN)		Trichechus manatus latirostris	
Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy Own Date out
14/04/2015	Loan In From Sender: FWC/RSW 1509 Vendor: USFWS/UNDETERM+	In	-	LOWRY / 103244	-	- - -
<u>Sex/Contraception</u>	Male / -			<u>Birth Type</u>	Wild Born	
<u>Hybrid Status</u>	Not a hybrid			<u>Birth Location</u>	Indeterminate	
<u>Enclosure</u>	MedTank1			<u>Birth Date/Age</u>	Undetermined / 2Y,2M,6D	
<u>Rearing</u>	-			<u>House Name</u>	[Cayo/LOWRY]	
<u>Dam</u>	[Wild / LOWRY]			<u>ID Elsewhere</u>	[RSW 1509/LOWRY]	
<u>Sire</u>	[Wild / LOWRY]			<u>Local ID</u>	[103244/LOWRY]	
				<u>Transponder</u>	[00-072A-92D9[-/Right]/LOWRY] [00-072A-9AA3[-/Left]/LOWRY]	

BPL15-02479 Local ID: 103261						
Individual	Florida manatee		Endangered (EN)		Trichechus manatus latirostris	
Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy Own Date out
11/05/2015	Loan In From Sender: FWC/RSW 1514 Vendor: USFWS/UNDETERM+	In	-	LOWRY / 103261	-	- - -
<u>Sex/Contraception</u>	Female / -			<u>Birth Type</u>	Wild Born	
<u>Hybrid Status</u>	Not a hybrid			<u>Birth Location</u>	Indeterminate	
<u>Enclosure</u>	FL15D			<u>Birth Date/Age</u>	Undetermined / 2Y,1M,9D	
<u>Rearing</u>	-			<u>House Name</u>	[Camlee/LOWRY]	
<u>Dam</u>	[Wild / LOWRY]			<u>ID Elsewhere</u>	[RSW 1514/LOWRY]	
<u>Sire</u>	[Wild / LOWRY]			<u>Local ID</u>	[103261/LOWRY]	

BPL15-02519 Local ID: 103271						
Individual	Florida manatee		Endangered (EN)		Trichechus manatus latirostris	
Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy Own Date out
11/08/2015	Loan In From Sender: FWC/RNW 1513 Vendor: USFWS/UNDETERM+	In	-	LOWRY / 103271	-	- - -
<u>Sex/Contraception</u>	Female / -			<u>Birth Type</u>	Wild Born	
<u>Hybrid Status</u>	Not a hybrid			<u>Birth Location</u>	Indeterminate	
<u>Enclosure</u>	FL15D			<u>Birth Date/Age</u>	Undetermined / 1Y,10M,9D	
<u>Rearing</u>	-			<u>House Name</u>	[Marmalade/LOWRY]	
<u>Dam</u>	[Wild / LOWRY]			<u>ID Elsewhere</u>	[RNW 1513/LOWRY]	
<u>Sire</u>	[Wild / LOWRY]			<u>Local ID</u>	[103271/LOWRY]	

BPL16-02593 Local ID: 103321						
Individual	Florida manatee		Endangered (EN)		Trichechus manatus latirostris	
Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy Own Date out
21/03/2016	Loan In From Sender: FWCC/UNDETERM+ Vendor: USFWS/ NDETERM+	In	-	LOWRY / 103321	-	- - -
<u>Sex/Contraception</u>	Male / -			<u>Birth Type</u>	Wild Born	
<u>Hybrid Status</u>	Not a hybrid			<u>Birth Location</u>	Indeterminate	
<u>Enclosure</u>	MedTank1			<u>Birth Date/Age</u>	Indeterminate / 1Y,9M,4D	
<u>Rearing</u>	-			<u>Freeze Branding</u>	[H2/LOWRY]	
<u>Dam</u>	[GAN: BPL16-02592 LOWRY / 103320]			<u>House Name</u>	[Neuson/LOWRY]	
<u>Sire</u>	[Wild / LOWRY]			<u>Local ID</u>	[103321/LOWRY]	
				<u>Transponder</u>	[00079A77CF/[Shoulder/Right]/LOWRY] [00079AD90E/[Shoulder/Left]/LOWRY]	

BPL16-02636 Local ID: 103340						
Individual	Florida manatee		Endangered (EN)		Trichechus manatus latirostris	
Date in	Acquisition - Vendor/Local ID	Phy	Own	Reported By	Disposition - Recipient/Local ID	Phy Own Date out
24/06/2016	Loan In From Sender: FWCC/RNW1620 Vendor: USFWS/UNDETERM+	In	-	LOWRY / 103340	-	- - -
<u>Sex/Contraception</u>	Female / -			<u>Birth Type</u>	Wild Born	
<u>Hybrid Status</u>	Not a hybrid			<u>Birth Location</u>	Undetermined	
<u>Enclosure</u>	FL15D			<u>Birth Date/Age</u>	24/04/2016 +/- 10 day / 1Y,1M,27D	
<u>Rearing</u>	-			<u>House Name</u>	[Agua/LOWRY]	
<u>Dam</u>	[GAN: BPL16-02635 LOWRY / 103339]			<u>Local ID</u>	[103340/LOWRY]	
<u>Sire</u>	[Wild / LOWRY]					

BPL17-02700 | Local ID: 103369

Individual	Florida manatee	Endangered (EN)	Trichechus manatus latirostris
Date in	Acquisition - Vendor/Local ID	Phy Own Reported By	Disposition - Recipient/Local ID
10/01/2017	Loan In From Sender: FWCC/RSW1702 Vendor: USFWS/UNDETERM+	In - LOWRY / 103369	-
<u>Sex/Contraception</u>	Female / -	<u>Birth Type</u>	Wild Born
<u>Hybrid Status</u>	Not a hybrid	<u>Birth Location</u>	Indeterminate
<u>Enclosure</u>	LOWRY	<u>Birth Date/Age</u>	10/03/2016 +/- 2 month / 1Y,3M,10D
<u>Rearing</u>	-	<u>House Name</u>	[Gleewood/LOWRY]
<u>Dam</u>	[Wild / LOWRY]	<u>Local ID</u>	[103369/LOWRY]
<u>Sire</u>	[Wild / LOWRY]	<u>Transponder</u>	[00-071E-08D4[/-Right]/LOWRY] [00-071E-18EB[/-Left]/LOWRY]

BPL17-02706 | Local ID: 103372

Individual	Florida manatee	Endangered (EN)	Trichechus manatus latirostris
Date in	Acquisition - Vendor/Local ID	Phy Own Reported By	Disposition - Recipient/Local ID
31/01/2017	Loan In From Sender: FWCC/RSW1703 Vendor: USFWS/UNDETERM+	In - LOWRY / 103372	-
<u>Sex/Contraception</u>	Male / -	<u>Birth Type</u>	Wild Born
<u>Hybrid Status</u>	Not a hybrid	<u>Birth Location</u>	Indeterminate
<u>Enclosure</u>	FLM1	<u>Birth Date/Age</u>	31/01/2013 +/- 1 month / 4Y,4M,20D
<u>Rearing</u>	-	<u>House Name</u>	[Ranglee/LOWRY]
<u>Dam</u>	[Wild / LOWRY]	<u>Local ID</u>	[103372/LOWRY]
<u>Sire</u>	[Wild / LOWRY]	<u>Transponder</u>	[00071E5A32[/-Right]/LOWRY] [00071E4105[/-Left]/LOWRY]

BPL17-02721 | Local ID: 103382

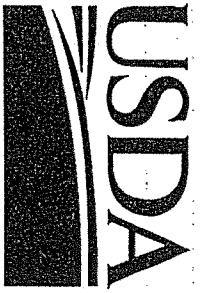
Individual	Florida manatee	Endangered (EN)	Trichechus manatus latirostris
Date in	Acquisition - Vendor/Local ID	Phy Own Reported By	Disposition - Recipient/Local ID
12/04/2017	Loan In From Sender: FWC/RSW1715 Vendor: USFWS/UNDETERM+	In - LOWRY / 103382	-
<u>Sex/Contraception</u>	Male / -	<u>Birth Type</u>	Wild Born
<u>Hybrid Status</u>	Not a hybrid	<u>Birth Location</u>	Undetermined
<u>Enclosure</u>	MedTank1	<u>Birth Date/Age</u>	01/01/2007 +/- 6 month / 10Y,5M,19D
<u>Rearing</u>	-	<u>House Name</u>	[Pneumomars/LOWRY]
<u>Dam</u>	[Wild / LOWRY]	<u>Local ID</u>	[103382/LOWRY]
<u>Sire</u>	[Wild / LOWRY]	<u>Old Accession Number</u>	[09144/LOWRY]

BPL17-02728 | Local ID: 103388

Individual	Florida manatee	Endangered (EN)	Trichechus manatus latirostris
Date in	Acquisition - Vendor/Local ID	Phy Own Reported By	Disposition - Recipient/Local ID
10/05/2017	Loan In From Sender: FWC/RNW1712 Vendor: USFWS/UNDETERM+	In - LOWRY / 103388	-
<u>Sex/Contraception</u>	Female / -	<u>Birth Type</u>	Wild Born
<u>Hybrid Status</u>	Not a hybrid	<u>Birth Location</u>	Indeterminate
<u>Enclosure</u>	MedTank1	<u>Birth Date/Age</u>	10/05/2007 +/- 1 year / 10Y,1M,10D
<u>Rearing</u>	-	<u>House Name</u>	[Pascow/LOWRY]
<u>Dam</u>	[Wild / LOWRY]	<u>Local ID</u>	[103388/LOWRY]
<u>Sire</u>	[Wild / LOWRY]		

BPL17-02729 | Local ID: 103389

Individual	Florida manatee	Endangered (EN)	Trichechus manatus latirostris
Date in	Acquisition - Vendor/Local ID	Phy Own Reported By	Disposition - Recipient/Local ID
10/05/2017	Loan In From Sender: FWC/RNW1713 Vendor: USFWS/UNDETERM+	In - LOWRY / 103389	-
<u>Sex/Contraception</u>	Female / -	<u>Birth Type</u>	Wild Born
<u>Hybrid Status</u>	Not a hybrid	<u>Birth Location</u>	Undetermined
<u>Enclosure</u>	MedTank1	<u>Birth Date/Age</u>	08/03/2017 +/- 7 day / 0Y,3M,12D
<u>Rearing</u>	-	<u>House Name</u>	[Cotee/LOWRY]
<u>Dam</u>	[GAN: BPL17-02728 LOWRY / 103388]	<u>Local ID</u>	[103389/LOWRY]
<u>Sire</u>	[Wild / LOWRY]		



United States
Department of
Agriculture

Marketing and
Regulatory
Programs

Animal and
Plant Health
Inspection
Service

Animal Care

EXPIRATION DATE: FEBRUARY 15, 2018

This is to certify that

TAMPAS LOWRY PARK ZOO

is a licensed
under the

CLASS C EXHIBITOR

Animal Welfare Act

(7 U.S.C. 2131 et seq.)

Certificate No.

58-C-0089

Customer No.

3101

Deputy Administrator



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

1 message

Barry, Anna <anna_barry@fws.gov>

Thu, Feb 14, 2019 at 2:39 PM

To: Leeann Rottman <Leeann.Rottman@zootampa.org>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Cc: Mary Cogliano <mary_cogliano@fws.gov>

Received, thank you.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

Please be aware that we process application on a first come first serve basis and due to the number of applications we receive some delays are unavoidable.

We do not accept applications via fax or e-mail.

Sign up for our e-newsletter to learn how we're working around the globe to protect species and their habitats!



On Thu, Feb 14, 2019 at 2:24 PM Leeann Rottman <Leeann.Rottman@zootampa.org> wrote:

Hi Ms. Barry,

We are work on a plan with Dr. Mike Walsh to be our primary back up. These plans should be finalized by tomorrow. In addition, Jacksonville Zoo veterinarians Dr. Meredith Persky and Dr. Yousuf Jafarey have agreed, with their Directors approval, to also provide back up to us as needed.

Thank You,

Lee Ann Rottman

Vice President, Conservation

ZooTampa at Lowry Park

1101 West Sligh Ave

Tampa, FL 33602

(813) 935-8552 ext 5221

C (813) 695-2135

leeann.rottman@zootampa.org



Consider the environment;

Think before you print!



From: Barry, Anna [mailto:anna_barry@fws.gov]

Sent: Thursday, February 14, 2019 2:02 PM

To: Leeann Rottman <Leeann.Rottman@ZooTampa.org>; Joe Couceiro <Joe.Couceiro@ZooTampa.org>; Larry Killmar <Larry.Killmar@ZooTampa.org>

Cc: Mary Cogliano <mary_cogliano@fws.gov>

Subject: Lowry Park Zoological Society of Tampa

Lee Ann,

In your LOA, Section III, Provision 9 it states the following:

9. All critical care facilities must have a full-time critical care manatee veterinarian available on a 24 hour basis to answer questions and treat animals. An alternate veterinarian must be available to treat manatees when the facility veterinarian is not available. No facility should be closed for new incoming cases due to staff availability.

Based on the above Provision, please clarify your facilities protocol to meet this criteria.

Sincerely,

Anna Barry

Supervisory Policy Specialist

USFWS/Division of Management Authority

Branch of Permits, MS: IA

5275 Leesburg Pike

Falls Church, VA 22041-3803

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Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

Leeann Rottman <Leeann.Rottman@zootampa.org>

Thu, Feb 14, 2019 at 10:24 AM

To: "Barry, Anna" <anna_barry@fws.gov>

Cc: Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Dear Ms. Barry,

Please see attached updates (summaries and resumes) to our staff for our Manatee Critical Care Center.

Thank You,

Lee Ann Rottman

Vice President, Conservation

ZooTampa at Lowry Park

1101 West Sligh Ave

Tampa, FL 33602

(813) 935-8552 ext 5221

C (813) 695-2135

leeann.rottman@zootampa.org



Consider the environment;

Think before you print!



From: Barry, Anna [mailto:anna_barry@fws.gov]

Sent: Wednesday, February 13, 2019 4:29 PM

To: Leeann Rottman <Leeann.Rottman@ZooTampa.org>

Cc: Joe Couceiro <Joe.Couceiro@ZooTampa.org>

Subject: Lowry Park Zoological Society of Tampa

Ok, thanks,

Anna Barry

Supervisory Policy Specialist

USFWS/Division of Management Authority

Branch of Permits, MS: IA

5275 Leesburg Pike

Falls Church, VA 22041-3803

1-800-358-2104, ext. 1976 or 703-358-1976

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[Quoted text hidden]

[Quoted text hidden]


[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]



 **Lauren N Smith CV February 2019.pdf**
295K

 **Lee Ann Rottman Resume - 2019.pdf**
200K

 **Chris Massaro Resume 2019.pdf**
98K

 **Tiffany Burns Resume.pdf**
169K

 **Molly Lippincott Resume.pdf**
178K

 **Jaime Vaccaro resume.pdf**
215K

 **Lisa Smith Resume.pdf**
221K

 **Natalie Thompson's Resume.pdf**
141K

 **Diana Szoke. Resume.pdf**
112K

 **ErinCampbell.Resume2018-1.pdf**
97K

 **Manatee Staff Updates 2019.docx**
17K

Erinn C. Campbell

(b) (6)

EDUCATION

University of Florida- Gainesville, FL

- Bachelors of Science- Entomology & Nematology - 5/18
 - Graduated Cum Laude

Santa Fe College - Gainesville, FL

- Associate of Science - Zoo Animal Technology - 12/16
 - Dean's List all semesters

Florida Gulf Coast University - Fort Myers, FL

- Associate of Arts - Environmental Science - 12/12

EXPERIENCE

Animal Care Associate – ZooTampa at Lowry Park- Tampa, FL 12/18 – Present

- Duties consist of husbandry and welfare of Florida native species including River otters, Red wolves, Key deer, Striped skunk, Sandhill cranes, Bald eagles, Barred and Screech owls, Florida box turtles and Gopher tortoises.
- Utilize operant conditioning to train and maintain husbandry behaviors of River otters and key deer.

Intern - ZooTampa at Lowry Park - Tampa, FL 8/18 – 11/18

- Husbandry and welfare of exotic mammals, birds, reptiles, amphibians, invertebrates, and domestic hoofstock species.
- Assisted keeper staff with maintenance and upkeep of facilities, enrichment design/distribution, record keeping, and administering diets.
- Assisted keeper staff during animal ambassador mingles and educational shows/demonstrations for the general public.

Intern - Lube Bat Conservancy - Gainesville, FL 10/17- 7/18

- Experience in general husbandry and welfare of 11 bat species including diet prep, enrichment development, training, administration of medications, daily observations, record keeping and habitat maintenance.

Zoo Keeper - Santa Fe College Teaching Zoo - Gainesville, FL - 5/15 – 12/16

- Successfully utilized operant conditioning to train White-handed Gibbons to participate in daily medical procedures and annual exams.
- Increased and maintained the behavioral repertoire of several species including, apes/monkeys, hoofstock, birds and cats to provide more fluid daily husbandry/welfare procedures.
- Experience in proper animal capture, restraint and handling of birds, small mammals, and reptiles for daily checks, inclement weather preparation, transportation and medical procedures.
- Assisted vet staff during medical procedures of multiple species including, White-handed Gibbons, Red-ruffed Lemurs, Matschie's Tree-kangaroo, Emu and Peafowl.
- Corresponded with supervisors to improve animal welfare of a Green Iguana after observing behavioral and dietary changes.
- Experience in proper husbandry and welfare of over 120 species including large mammals, birds, reptiles and amphibians.
- Prepared daily diets for over 75 species while adhering to USDA and AZA quality standards.
- Received above average evaluations for guiding diverse groups of guests on tours of AZA accredited zoo grounds.

Keeper Assistant/Work Study- Santa Fe College Teaching Zoo – Gainesville, FL - 5/16 – 12/16

- Worked in a team to construct a new night-house for Red-ruffed Lemurs to reduce group aggression.
- Successfully helped construct and fortify a new adult Alligator habitat in a revitalized pond on zoo grounds.

Concerns for Lowry Park Zoo's accreditation with AZA and unsafe veterinarian practices

"Among the things that AZA closely examines are whether the institution follows the *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*" p. 31 The guide to accreditation of zoological parks and aquariums 2012 edition

Concerns:

- *If AZA looks closely whether we follow the Guidelines for Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals, then why are the following guidelines not followed*

"Veterinary coverage must be available 7 days/wk, 24 hr/day for any zoo or aquarium regardless if the coverage is supplied by a full-time or part-time veterinarian." p. 5 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

Concerns:

- *Why did it take so long for a vet to be on scene when an eland became entangled in a rope? A vet was not on scene for several hours. Staff had to take pictures of the animal and send them to the vet in order for him to believe it was a serious enough issue to be on site.*
- *Injured and sick manatees may arrive after hours. Should a vet be present at the arrival of a manatee?*

"2. Veterinary Coverage Utilizing a Veterinarian on a Part-Time Basis

Although it is important to have a veterinarian available for emergency coverage at all times, the part-time veterinarian must also make weekly scheduled visits to the facility in order to become familiar with the clinical cases and to closely supervise their veterinary care. The part-time veterinarian in charge of the health program must establish short term disease containment procedures that must be followed until the veterinarian arrives. The part-time veterinarian is also responsible for the development and implementation of the long term preventive" p. 5 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

Concerns:

- *How is Lowry Park Zoo following this? Why do we not have a second veterinarian or a part time vet? Are interns considered to be our part time vet? If so, who are these people and what are their schedules?*

“d. Necropsy

The zoo or aquarium must have a refrigerated area for holding dead animals that is physically separate from live animal holding, treatment, and surgery areas and from food supply storage or preparation areas. Ideally, there should be an isolated area on the grounds for performing animal necropsies, or the carcass should be transported to a facility for a postmortem examination as soon as possible and no longer than 24 hours after death.” p.7-8 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

Concerns:

- *A dead giraffe and eland were left in the manatee hospital overnight without refrigeration*
- *The carcasses of an eland and giraffe were left in the stericycle containers outside in the heat by the manatee hospital for several days after the necropsies were conducted. The tubs leaked down the service road.*

“2. Preventive Medicine Preventive medicine programs must be established at every zoo and aquarium.” p. 8 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

“b. Parasite Control Fecal examinations should be conducted at least annually on all individuals or group of animals” p. 9 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

Concerns:

- *The zoo previously conducted fecal examinations on the entire collection quarterly*
- *According the guidelines we must be conducted the examinations at least once per year, which we currently do not follow*
- *Primates- due to lack of routine parasite testing, even when there is evidence of parasites in loose stool, 5 staff members have had stomach issues related to this lack of protocol*
- *Zebra- was shipped to another facility and was found to be full of intestinal parasites by the other facility.*
- *Giraffe- per Dr. Ball was near death due to large amount of parasites, perhaps with routine checking it would not have reached such a critical point.*
- *Skunk- staff received a skunk out of quarantine with confirmed Coccidia, no action was taken to correct the situation.*

2. Diets/Husbandry Reviews

Periodic reviews of the diets and husbandry procedures should be conducted by the veterinarian in consultation with a nutritionist. The review should include an analysis of the relationship of diets to the frequency of disease problems, mortality rate, and reproductive problems. p 11 *Guidelines For Zoo and Aquarium Veterinary Medical Programs and Veterinary Hospitals*

Concerns:

- *Does our veterinarian work with a nutritionist?*
- *If he is a nutritionist, what are his credentials?*
- *When diet changes are performed they must be documented according to the zoo's policies. Were these changes documented, example giraffe and orangutans?*
- *Veterinarian changed many diets two years ago when he started. Since then many animals have died. There is concern that many animals have died because of these changes.*
 - o *Examples*
 - *Giraffe*
 - *Orangutan*
 - *Chimpanzee*
 - *Tapir*

Unsafe Vet Practices at the Zoo

- Non-sterilization
 - o Examples
 - Not sterilizing sites on animals for blood draws or injections including chimps, manatees and elephants
- Vet staff does not always wear gloves when performing medical procedures
 - o Examples
 - Several manatee injections and chest tap
 - Blood draw on chimps
- Vet staff used duct tape to hold down an animal on table for procedure
 - o This is unnecessary since there are straps that can be utilized
- Vet staff has asked animal keepers to send pictures of injured and sick animals rather than caring for the animal immediately
 - o Examples
 - Whistling duck – eye injury (see attached emails and pictures)
 - Eland- Stuck in rope
 - Patas Monkey- Blood in stool
- Research being performed on sick and injured manatees
 - o Invasive heart research is being performed on manatees
 - This research involves placing manatees on unsafe tables where they can roll off and injure people. This is also stressful on the animals that are already sick and injured
 - o "Breaking new ground" by giving an injectable drug orally. Per the manufacturer of said drug this is illegal and per the Veterinary Extra Label Use Act, the situation did not meet the requirements for this to be ethical
- Lack of teaching staff

- Example
 - The veterinarian did not properly teach vet tech how to tube a manatee, this caused one the procedures to go wrong, in turn almost killing the animal (see attached account of incident)
- Animals misdiagnosed due to lack of efficient diagnostics
 - Examples:
 - Orangutan- Rango was diagnosed and treated for a heart condition, though no diagnostics were performed to confirm this. His necropsy showed his heart to be normal
 - Bush Baby- Reacted badly to anesthesia, Vet diagnosed him with TB, Was found to be negative for TB
 - Sandhill Crane- on being examined for not eating an obvious wound on the beak was pointed out by the keeper. Vet did not acknowledge this and diagnosed her with West Nile

At Lowry Park Zoo with many of the animal keepers there is a lack of confidence with the veterinarian. There is belief that the veterinarian is quick to euthanize animals. With a history of this, animal keepers are nervous to call the vet staff to look at sick animals. There is belief that rather than treat animals, the vet will just assume the animal is going to die and perform unnecessary euthanasia.

- Examples of animals veterinarian wanted to euthanize but have since recovered:
 - Manatee “Smoochie”
 - Manatee “Tomobella”
 - Manatee “Suwannee”
 - Manatee “Friedaghates”

There is also a lack of confidence with animals that have to be anesthetized for medical reasons. Many animals have not recovered from anesthesia or have died later from complications from the anesthesia.

- Examples
 - Died during anesthesia
 - Chimp
 - Died after shortly after anesthesia
 - Warthog
 - Key deer
 - Impala

Lack of trust with vet

- Example
 - Vet said that he had spoken with Virginia Edmonds about euthanizing our manatee, “Maggie”, and she was fine with it. We proceeded with the euthanizing her, only to find out later that she never agreed to euthanizing her

Ways to further the zoo's ability to be accountable for specialized positions

Checks and balances

Have already established a need for an associate vet

Unable to maintain one due to conflicts with DMS

Have established a need for AWC

Not effective due to breaches in confidentiality, interference and intimidation by committee members.

Have established a dialogue with CEO regarding these issues, however there are choke points in the chain of command that restrict his knowledge of certain aspects. These choke points cannot be avoided if we are to respect the chain of command. Skipping over the chain of command creates an environment of antagonism and hostility that makes change difficult to achieve.



Barry, Anna <anna_barry@fws.gov>

Additional information regarding ZooTampa management-staff discussions regarding Dr. Ball and facility concerns - received at NFESO February 12, 2019

1 message

Teresa Calleson <teresa_calleson@fws.gov>

Thu, Feb 14, 2019 at 3:52 PM

To: Anna Barry <anna_barry@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>

Cc: Jay Herrington <Jay_Herrington@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Jim Valade <jim_valade@fws.gov>

Hi Anna and Mary,

In line with how all these complaints have been handled to date since they began coming to the North Florida Ecological Services Office in late 2017 - early 2018, I'm passing along to DMA, as the permitting entity, additional information that I received yesterday reflecting staff complaints to management about Dr. Ray Ball's veterinary care and other facility-related concerns. Please let me know if you have questions. I will be adding this to the file received from Complainant 1. Thank you!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

Email received from Complainant 1:

I attached the notes from the meeting I had with then Director Craig Pugh and CFO Elizabeth Henning in 2012.

In Oct or Nov of 2016 the keepers organized a meeting with Larry Killmar to discuss continued concerns about animal welfare due to questionable vet practices.

In Dec. 2016. As a result of the previous meeting CEO Joe Couciero and Larry Killmar called a meeting of Area Care Managers. The managers were not allowed to address their concerns. They were told there was no documentation against Dr. Ball and their raises were conditional on them getting along with him. Virginia had copies of previous

complaints made against Dr, Ball and tried to present them. The documentation was ignored and she was told she was too passionate to work with manatees

June 2017- It was decided by zoo management that the manatee program would be restructured as a veterinary program, not animal care, Virginia was removed from running the hospital and the staff was told they would be repurposed.

After the incident with Gleewood and the hippo. Zoo management restructured the restructure and removed Dr. Ball as sole manager of the Manatee hospital returning it to animal care under the general curator Chris Massaro.

Several meetings were held with Massaro and the manatee staff where very direct questions about Dr. Ball were asked. Including concerns about withholding fluids on manatees who were not eating, sedating all manatees for transport, and extreme diet changes. Massaro assured us that those wouldn't be issues because Dr. Ball only did those things to spite Virginia. He said since there was no documentation about Dr. Ball nothing could be done. I presented him with a folder that included copies of all the documentation we already submitted as well as all the incidents that had occurred since. The folder was handed back to me unopened and I was told to keep it to myself.

Oct. 24. 2018- I had an exit interview with the Human Resource where again all the previous documentation was resubmitted.

2 attachments



Vet Concerns.docx

20K



Ways to further the zoo.docx

12K



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

1 message

Barry, Anna <anna_barry@fws.gov>

Thu, Feb 14, 2019 at 2:01 PM

To: Leeann Rottman <leeann.rottman@zootampa.org>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Cc: Mary Cogliano <mary_cogliano@fws.gov>

Lee Ann,

In your LOA, Section III, Provision 9 it states the following:

9. All critical care facilities must have a full-time critical care manatee veterinarian available on a 24 hour basis to answer questions and treat animals. An alternate veterinarian must be available to treat manatees when the facility veterinarian is not available. No facility should be closed for new incoming cases due to staff availability.

Based on the above Provision, please clarify your facilities protocol to meet this criteria.

Sincerely,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
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Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa

Barry, Anna <anna_barry@fws.gov>

Thu, Feb 14, 2019 at 11:01 AM

To: Leeann Rottman <leeann.rottman@zootampa.org>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Bcc: "Scruggs, Pamela" <pamela_scruggs@fws.gov>, "Brisendine, Amy" <amy_brisendine@fws.gov>, Terri Calleson <Teresa_Calleson@fws.gov>

Received, thank you.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
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----- Forwarded message -----

From: **Leeann Rottman** <Leeann.Rottman@zootampa.org>

Date: Thu, Feb 14, 2019 at 10:26 AM

Subject: [EXTERNAL] RE: Lowry Park Zoological Society of Tampa

To: Barry, Anna <anna_barry@fws.gov>

Cc: Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Dear Ms. Barry,

Please see attached updates (summaries and resumes) to our staff for our Manatee Critical Care Center.

Thank You,

Lee Ann Rottman

Vice President, Conservation

ZooTampa at Lowry Park

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Consider the environment;

Think before you print!

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11 attachments


 **Lauren N Smith CV February 2019.pdf**
295K

 **Lee Ann Rottman Resume - 2019.pdf**
200K

 **Chris Massaro Resume 2019.pdf**
98K

 **Tiffany Burns Resume.pdf**
169K

 **Molly Lippincott Resume.pdf**
178K

 **Jaime Vaccaro resume.pdf**
215K

 **Lisa Smith Resume.pdf**
221K

 **Natalie Thompson's Resume.pdf**
141K

 **Diana Szoke. Resume.pdf**
112K

 **ErinCampbell.Resume2018-1.pdf**
97K

 **Manatee Staff Updates 2019.docx**
17K

Lisa Smith

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EDUCATION:

Eckerd College (2006-2010)
Bachelors of Arts Psychology

St. Petersburg, FL

PROFESSIONAL EXPERIENCE:

ZooTampa at Lowry Park (May 2012-Present)
Florida Mammals Animal Care Professional

Tampa, FL

Responsible for general care and husbandry of a variety of Florida native animals. Tasks include cleaning, feeding, supplying enrichment, exhibit maintenance, training, and maintaining detailed records. Also responsible for all aspects of care for the patients undergoing rehabilitation at the zoo's manatee critical care facility. These duties include daily cleaning, diet preparation and feeding, maintaining detailed feeding and medical records, manatee restraint during medical procedures, behavioral observations of critical patients, and exhibit maintenance. As part of the critical care team, I have participated in overnight watches, hand rearing orphaned calves, manatee rescues, manatee releases, and post release monitoring.

Tampa's Lowry Park Zoo (January 2012-May 2012)
Florida Mammals Intern

Tampa, FL

Majority of internship consists of working at the zoo's West Indian Manatee rehabilitation hospital. Responsibilities include but are not limited to; daily care and feeding of hospital patients, behavioral observations, exhibit maintenance, communication with public, and assisting staff with medical treatments. Internship also includes occasional husbandry experience with black bear, Florida panther, red wolves, skunks, river otters, turkeys, and pelicans.

Bayshore Animal and Avian Hospital (December 2010-May 2012)
Nightly Ward Attendant/Veterinary assistant

St. Petersburg, FL

Responsible for overseeing and maintaining health of all animals in the facility, this includes both boarding and hospital animals. Duties include reporting any unusual behavior of animals, assisting technicians and doctors in restraints, as well as feeding, walking, and cleaning up after animals. Other duties include maintaining cleanliness of kennels and hospital. Required to work cooperatively with others as well as alone. Strong attention to detail a must, as following detailed instructions in order to dispense nightly medications is required.

Clearwater Marine Aquarium (January-April 2008)

Clearwater, FL

Sea Turtle Rehabilitation Intern

Responsibilities included daily care and feeding of both resident and rehab patient sea turtles, administering medication, assisting staff with medical treatments, maintaining water quality, and participation in public chats. Also participated in a number of rescues and releases.

EXTRA CURRICULAR:

Busch Gardens (February 2010 to May 2010)

Tampa, FL

Volunteered as part of an independent study while attending Eckerd College. Primary duties were to observe and record the activities of five female Asian elephants and fill out ethograms. Also acquired knowledge about exhibit maintenance and animal enrichment.

New Zealand: Study Abroad (January 2009)

This opportunity allowed me to work on an ongoing project headed by Dr. Bernd Wursig of Texas A&M, collecting and analyzing data on Dusky Dolphins and New Zealand Fur Seals. Opportunity included the experience of working long hours in the field, while paying extreme attention to detail in order to collect data. This opportunity also awarded the chance to observe animals and their behavior in their natural environments.

SKILLS AND ACTIVITIES:

- Scuba certified (PDIC)
- CPR/ first aid certified
- Crane Certified
- Member of Animal Behavior Management Committee at ZooTampa
- Cross trained in the Asia Area of ZooTampa (2017-2018)
- Eckerd College Academic Achievement Scholar
- William and Sandra Ripberger Endowed Scholarship
- Blanche S. Ray Endowed Study Abroad Scholarship
- Eckerd College Association of Environmental Professionals

Basic husbandry of Trichechus manatus latirostris in the Zoo's Manatee Critical Care Center includes verifying, rescue, transport, medical treatment, observation, data collection, morphometrics, diet management, feeding, restraint, water quality, release, post release monitoring and post release health assessments.

Lauren Smith, DVM

Staff Veterinarian

- *3 years performing the above job duties as Staff Veterinarian at the ZooTampa Manatee Critical Care Center*
- *1 year of clinical work as an Aquatic Animal Health Intern for the University of Florida. Included medical management of rehabilitating manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center and marine mammal response/transport, manatee health assessments, necropsy, and independent research at the FWC Marine Mammal Pathobiology Lab*
- *To date, medically directed the rehabilitation of 47 manatees at Tampa's Lowry Park Zoo Manatee Critical Care Center*

Lee Ann Rottman

VP of Conservation

- *Management of ZooTampa's Manatee Critical Care Center for 15 years*
- *Represents ZooTampa at all Manatee Rehabilitation Partnership meetings including being Co-chair of Steering Committee and past Co-chair of the Rescue Rehabilitation Committee*
- *Responsible for all aspects of the Zoo's Manatee Rehabilitation Program including working with both State and Federal partners, budgeting, record keeping, and annual reporting for the State reimbursement program*

Chris Massaro

General Curator for ZooTampa, Including ZooTampa's Manatee Critical Care Center

- *Worked for 4 years in critical care of manatees at the Zoo 2002 - 2006 (2 years in FLM and continued to treat manatees with the team for an additional 2 years while working the Primate area).*
- *Assisted with Supervision and management of the Manatee Program for the last 10 years 2009 - 2019.*

Tiffany Burns

Associate Curator of ZooTampa's Manatee Critical Care Center

- *15 years of animal experience, 10 years with marine mammals, including rescue, rehabilitation and release of sea lions and dolphins*
- *Assisted with yearly manatee health assessments at Crystal River*

Molly Lippincott

Animal Care Manager of Florida Mammals

- *9 years performing the above job duties at ZooTampa's Manatee Critical Care Center as an Animal Care Associate, Animal Care Professional and Senior Animal Care Professional*
- *1 year as Animal Care Manager of Florida Mammals*
- *To date, has assisted with the rehabilitation of 240 manatees*

Jaime Vaccaro

Animal Care Supervisor of Florida Mammals

- *11 years performing the above job duties at ZooTampa's Manatee Critical Care Center as an Animal Care Associate, Animal Care Professional and Senior Animal Care Professional*
- *3 months as Animal Care Supervisor of Florida Mammals*
- *To date, has assisted with the rehabilitation of 264 manatees*
- *9 months as an intern at ZooTampa's Manatee Critical Care Center*

Lisa Smith

Animal Care Professional

- *7 years performing the above job duties at ZooTampa's Manatee Critical Care Center as Animal Care Associate and Animal Care Professional*
- *To date, has assisted with the rehabilitation of 153 manatees*
- *3 months as an intern at ZooTampa's Manatee Critical Care Center*

Natalie Thompson

Animal Care Associate

- *8 years' experience providing animal care of Atlantic bottlenose dolphins which included their daily husbandry, restraint, and transport as Senior Trainer and Assistant Supervisor of animal training*
- *3 month intern at Mote marine laboratory providing the care for their resident West Indian manatees*
- *Assisted with Warm water manatee captures in December 2018*

Diana Szoke

Animal Care Professional

- *6 years' experience as an Animal Care Associate and Professional at ZooTampa at Lowry Park*
- *Assisted the Florida mammals team with manatee treatments and releases as requested*

Erinn Campbell

Animal Care Associate

- *2 years' experience in performing animal care at Santa Fe Teaching college*
- *3 months experience as an Animal care Associate at ZooTampa at Lowry Park*

Tiffany Burns
813-935-8552, ext. 273
Tiffany.Burns@lowryparkzoo.com

Experience:

ZooTampa, Tampa, FL

Associate Curator, 2018-Present

- Manages all assigned special projects for the Animal Department and coordinates appropriate Animal Department staff in the completion of those projects.
- Oversees USDA, FWC, and collection related water quality compliance issues for the Zoo. Works with the General Curator and animal care staff to ensure that all Zoo facilities are in compliance with stated regulations. Works with the Director of Facilities to prioritize and ensure that all USDA and FWC non-compliance issues are being addressed with established timelines and resources.
- Interacts with all regulatory agencies that govern collection husbandry.
- In collaboration with the Manager of Animal Training/Behaviors and the Manager of Animal Ambassadors as well as the Precision Behavior Team and General Curator – assesses guest experience and engagement initiatives and ensures those efforts enhance the image, distinctiveness, and value of ZooTampa.
- Assists the General Curator in ensuring quality guest relations and staff presentations.
- Reviews, submits, and coordinates work requests for the Animal Department. Works with the Chief Zoological Officer and the General Curator on developing work request priorities.
- Support the General Curator in planning, organizing, coordinating, and directing the Animal Department operations including the coordination of incoming and outgoing animal shipments as needed. Exercises initiative and independent judgment as required in providing staff coordination and consultation in the performance of their job duties.
- In cooperation with the Animal Care Managers and Commissary Manager, oversees, updates, and enforces safety programs within all areas of responsibility.
- Monitors and assists in the development when appropriate of area animal operant conditioning programs.
- Analyzes data to improve Animal Department operations.
- Analyzes SSP management and breeding recommendations to ensure compliance.
- Performs diverse administrative tasks to ensure smooth and efficient departmental operation.

ZooTampa, Tampa, FL

Animal Care Manager of Primates, 2016-2018

- Maintain Animal training, environmental enrichment devices and husbandry equipment while developing plans and projects to enhance the staff knowledge and advance training techniques.
- Maintain food preparation, dietary needs and animal exhibits insuring all USDA guidelines are being followed.
- Responsible for: training of new staff members, writing and implementing new protocols, scheduling, disciplinary actions, and yearly reviews.
- Oversee daily operations for Primate Team including: medical management, assigning and approving new behaviors, providing constructive feedback to staff, animal transports, and animal husbandry.
- Assist in daily training sessions for a wide variety of species using operant conditioning.
- Assist veterinarian staff with medical procedures.
- Adhere to standards and protocols set by AZA and USDA

Clearwater Marine Aquarium, Clearwater, FL

Supervisor of Marine Mammals, 2012- 2016

- Support and oversee the goals and objectives of the Marine Mammal Department by active participation of the animal population.
- Maintain food preparation, dietary needs and animal exhibits insuring all USDA guidelines are being followed.
- Maintain Animal training, environmental enrichment devices and husbandry equipment while developing plans and projects to enhance the staff knowledge and advance training techniques.
- Demonstrate advanced husbandry procedures, including collection and processing all samples.
- Responsible for orienting and training employees, job safety, guest safety, discipline and promotion recommendations to management.
- Work with the Manger on departmental projects, ensuring staff and volunteers have the proper equipment and materials to perform jobs safely and effectively, keeping costs within budget and maintaining established quality standards.
- Assist the Stranding team in rescue, rehabilitation and release of injured animals.
- Coordinate and aid in veterinary procedures with rehab and resident mammals under the guidance of the veterinarian.

Austin Savanna, Austin, TX

Primate/Carnivore Lead Keeper, 2011-2012

- Prepare daily animal diets and maintain sanitary areas for food preparation and storage.
- Establish and maintain training and enrichment programs.
- Maintain animal training, environmental enrichment devices and husbandry equipment.
- Collect and record accurate animal data, assess animal behavior and health daily.
- Hand raise and bottle feed several animal species.
- Directly assist the veterinarian on all animal procedures.
- Conduct fun and educational animal interactions

Anthony's Key, Roatan, Honduras

Marine Animal Supervisor, 2009

- Transport Sea Lions from St. Kitts to Honduras
- Manage and participate in the transport of the sea lions from St. Kitts to Honduras
- Maintain food preparation, dietary needs and animal exhibits.
- Maintain Animal training, environmental enrichment devices and husbandry equipment while developing plans and projects to enhance the staff knowledge and advance training techniques.
- Hand raise a juvenile Margay and several species of birds.
- Directly assist the veterinarian on animal physicals and medical procedures.

Marine World, St. Kitts West Indies

Assistant Curator of Marine Animals, 2008-2009

- Prepare daily animal diets and maintain sanitary areas for food preparation and storage.
- Collect and record accurate animal data, assess animal behavior and health daily.
- Teach trainers proper husbandry procedures, training methods and safety guidelines through active participation
- Conducted successful search and rescue effort for South American sea lions that escaped during Hurricane.
- Rehabilitated animals back to health after search and rescue.
- Directly assist vets with medication, fluids, and blood draw. Assisted the curator on animal relocation and transportation details.

Coral World, St. Thomas USVI

Assistant Curator of Marine Mammals, 2007-2008

- Oversee and maintain food preparation, dietary needs and animal exhibits insuring all USDA guidelines are being followed.
- Maintain Prepare daily animal diets.
- Maintain sanitary areas for food preparation and storage.
- Collect and record accurate animal data, assess animal behavior and health daily.
- Communicate and coordinate with the Vet Services team in all aspects of animal care.
- Responsible for training Trainers and Associate Trainers in the proper husbandry procedures, conditioning techniques, use of EED's and showmanship skills.
- Developed entertaining animal presentations and educational encounter programs.
- Assist Curator with new facility design. Participated in shark research, turtle rehabilitation and hatchling release.

Six Flags Marine World, Vallejo, CA

Marine Mammal Trainer, 2005-2007

- Maintain animal training, environmental enrichment devices and daily husbandry.
- Perform educational and entertaining presentations.
- Conduct fun and educational animal interaction programs.
- Prepare daily animal diets and maintain sanitary areas for food preparation and storage.
- Collect and record accurate animal data, assess animal behavior and health daily, and report any anomalies to the department manager.
- Demonstrate advanced husbandry procedures. Collaborate with researchers to conduct several research projects.

Other work Experience and Certifications

- Suncoast Primate Sanctuary-Primate Caregiver- Palm Harbor, Florida (August 2010- January 2011)
- A Dog's Best Friend-Dog Trainer- Plantation, Florida (January 2010- February 2011)
- Mirage Hotel and Casino Dolphin Habitat- Marine Mammal Intern- Las Vegas, Nevada (March 2004- March 2005)
- Rescue Scuba Certification (PADI)

Education:

- University of Nevada Las Vegas 2002-2004 *Psychology*
- Mesa State College 2001-2002 *General studies*
- (b) (6) High (b) (6) *Diploma*

Molly Lippincott

(b) (6)

EDUCATION:	B.S. Marine Science: Coastal Carolina University , Conway, SC; 2005 Semester Abroad: Deakin University , Warrnambool, Victoria, Australia; Fall 2003
EXPERIENCE:	<u>Animal Care Manager Manatee Critical Care Center & Florida Mammals Dept, ZooTampa</u> , Tampa, FL; October 2018-Present <ul style="list-style-type: none">• Responsible for managing and coordinating daily operational needs of department• Ensure proper training and development of six staff members• Oversee Florida collection and manatee critical care center which includes diets, SSP plans, training programs, enrichment, medical procedures with vet staff• Inspects area to be in compliance with USDA, FWC and ZooTampa guidelines• Perform diverse administrative tasks to ensure smooth and efficient departmental operation• Develops written and verbal reports as required• Daily Duty Supervisor for animal department on assigned days <u>Animal Care Supervisor Manatee Hospital & Florida Mammals Dept, ZooTampa</u> , Tampa, FL; December 2017-October 2018 <u>Senior Animal Care Professional: Manatee Hospital & Florida Mammals Dept, Lowry Park Zoo</u> , Tampa, FL; June 2009-Present <ul style="list-style-type: none">• Manatee Rehabilitation Hospital: Daily care for rescued sick and injured manatees from boat strikes, entanglements, cold stress, red tide and orphans• Manatee daily and 24 hour care includes feeding, observations, medical treatments including tube feeding, x-rays, bottle feeding orphans, educating public and releasing manatees to wild when rehab is complete, daily dive exhibit maintenance, restraint for medical treatments, media interviews• Provide animal husbandry, enrichment, exhibit maintenance, and restraint/handling for variety of species: Florida Panther, Black Bears, North American River Otters, Red Wolves, Bald Eagles, Sandhill cranes, wild turkeys, striped skunk, box turtles, Hooded Mergansers, Brown Pelicans, Eastern Screech Owls, Barred Owl• Operant conditioning of 1.2 Black bears, 2.1 Florida Panthers & 1.1 North American River Otters• Intern Coordinator- in charge of interviewing, training and evaluating rotating interns• Interact with VIP tours and guests daily• Weapons Team member - Ensure public, staff and animal safety• Maintain daily records and produce charts for department record keeping• Provide guest engagement daily through interactive formal and informal chats <u>Keeper I-III: Herps and Aquatics Dept, Lowry Park Zoo</u> , Tampa, FL; January 2007-June 2009 <ul style="list-style-type: none">• Performed Daily Animal Husbandry for large collection: Fresh and Saltwater fishes, Chelonians, Crocodilians, Invertebrates, Elasmobranchs, Reptiles, Amphibians, Komodo Dragon• Presented educational talks and feeding demonstrations of reptiles• Assisted in the successful breeding of the SSP species• Comfortable with capture techniques for small and large crocodilians• Trained in the handling of venomous snakes <u>Dive & Exhibit Educator, The Florida Aquarium</u> , Tampa, FL; February 2006- January 2007 <ul style="list-style-type: none">• Educated guests in Florida ecosystem studies as the dive narrator for Dive Interpretive Programs, lead the Wild Dolphin Ecotours, and narrator of two touch tanks• Cared for education classroom animals consisting of reptiles, amphibians, elasmobranchs, arachnids, mammalian, and invertebrates.
CERTIFICATIONS:	<ul style="list-style-type: none">• NAUI SCUBA - Open Water• American Heart Association Adult/Child/Infant CPR & AED• American Safety and Health Institute First Aid• Forklift trained – Sunbelt
SKILLS:	<ul style="list-style-type: none">• Weapons Team: Knowledge and ability to handle 20-gauge shotgun, 30.06 and .375 rifle

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| | <ul style="list-style-type: none">• Computer Software: Microsoft Office Word, Excel, PowerPoint, Adobe Acrobat |
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Christopher Massaro

(b) (6)

EDUCATION

2002 – Bachelors Degree in Anthropology / University of South Florida, Tampa, FL

EMPLOYMENT

Tampa's Lowry Park Zoo –June 2002 to present

General Curator

(October 2017 to Present)

- Supervises Animal Care Managers, Commissary Manager and Registrar
- Manages the Animal Department's annual budget
- Participates in the development and design of all new animal habitats and renovations
- Animal acquisitions, de-acquisitions, permits, husbandry programs, enrichment and behavioral management, etc.
- Produces and implements key Zoo policies and programs
- Partners with other Zoo departments to ensure a cooperative and successful environment
- Ensures excellence in guest experiences for all visitors including VIP and other premium tours
- Focuses on enhancing Zoo relevance in the community and beyond

Curator of Mammals/Associate Curator

(April 2013 to October 2017)

- Responsible for all the duties under the Animal Department Operations Manager job description (listed below)
- Partners with the General Curator in the Supervision of Animal Care Managers
- Mammal acquisitions, de-acquisitions, permits, husbandry programs, enrichment and behavioral management, etc.
- Assists the General Curator with producing and implementing key Zoo policies and programs
- Partners with other Zoo departments to ensure a cooperative and successful environment
- Ensures excellence in guest experiences for all visitors including VIP and other premium tours
- Focuses on enhancing Zoo relevance in the community and beyond

Animal Department Operations Manager

(Dec 2009 to April 2013)

- Responsible for the successful daily operation of the animal department with a collection of approximately 1,500 animals
- Acts as the main Project Manager for the Animal Department

- Supervises exhibit construction and design
- Maintains the facility's AZA, FWC and USDA compliance
- Oversees the animal department equipment needs, work order maintenance and projects
- Supervises animal shipments, relocations and introductions
- Maintains Animal department work orders, capital improvements and safety program spreadsheets

Animal Care Manager – Africa

(April 2011 to March 2016 while working as Curator)

- Management of staff and animals
- Manages 1.5 Elephants in a protected contact environment
- Positive reinforcement focused operant conditioning
- Established Elephant program and training philosophy for advanced elephant welfare
- Maintain and enforce USDA/AZA standards
- Hiring and training of new staff
- Established a nationally recognized elephant program:
 - AZA Bean Award – along with the San Diego Safari Park (authored the successful application) (2014)
 - ABMA – Award for Innovation
 - ABMA – Award for Impact
- Creating and enforcing safety protocols
- Care/husbandry for African elephants, Kenyan impala, Nile lechwe, white rhinoceros, giraffe, zebra, okapi, cheetah, meerkat, pygmy hippo, red river hog, marabou stork and other various African ungulate and avian species

Assistant Curator Asia/Australia

(Oct 2006 to Dec 2009)

- Supervision/Management of staff and animals in the Asian and Australian collection
- Animal acquisitions, de-acquisitions and permits
- Hiring and training of new staff
- Setting up routines for new exhibits and acquisitions
- Record keeping
- Exhibit design
- Establishing animal diets and nutrition
- Creating and enforcing safety protocols
- Maintaining and enforcing AZA standards and guidelines
- Care/husbandry for tigers, Indian rhinos, Malayan tapirs, sloth bears, clouded leopards, babirusa, warty pigs, bearded pigs, anoa, nilgai, tufted deer, sarus cranes, geese, muntjac, singing dogs, kangaroos, wallabies and koalas

Keeper IV - Primate department

(April 2004 to Oct 2006)

- Daily public interactions/talks about the animals/conservation
- Perform light maintenance on exhibits and night houses
- Designed and built large additions to exhibits
- Observe and record animal behavior
- Operant conditioning

- Cover as duty supervisor
- Care/husbandry for chimpanzees, orangutans, siamangs, mandrills, colobus, tamarins, marmosets, lemurs, howlers, guenons, ducks, guinea fowl and sloths

Keeper II - Florida Mammals department/Manatee rehabilitation program (June 2002 to April 2004)

- Perform minor health care procedures on manatees
- Tube feed manatees
- Dive manatee tanks for cleaning
- Operant conditioning
- Care/husbandry for black bears, Florida panther, Persian leopard, river otters, bison, deer, red wolves, grey fox, skunks, cranes, bald eagles, red-tailed hawk, kestrel, ducks, pelicans and manatees

Memberships/Committees-

- Rhinoceros TAG steering committee member
- AZA Professional fellow
- International Rhino Keepers Association (IRKA) professional member

Conferences/Training-

- Attended AZA professional development programs:
 - Managing for Success – Career Development (Feb. 2010)
 - Managing for Success – Organizational Development (Feb. 2011)
 - Principles of Elephant Management I (Feb. 2012)
 - Principles of Elephant Management II (Oct. 2012)
- Presented at AZA annual conferences:
 - Progressive practices in Elephant Management session in San Diego (2016)
 - Poster session in Kansas City on elephant welfare, management and training (2013)
- Participated in San Diego Zoo's Koala husbandry and conservation training program in June 2009
- Participated in the IRKA's professional development program in Sept 2010 (Sumatran Rhino management and husbandry at the Cincinnati Zoo)

TLPZ Institutional Representative for the following species/taxa-

- Elephants
- Rhinos
- Ungulates

Additional Qualifications-

- Lowry Park Zoo Emergency Response Team (weapons team) - trained on weapon safety and usage for emergency situations
- Authored the successful Bean Award application (2014)
- Negative TB test in Fall 2017
- Vaccinations
 - Tetanus (updated 2013)
 - Hepatitis A (2006)
 - Hepatitis B (2005)

LEE ANN ROTTMAN

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LEE ANN ROTTMAN

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LEE ANN ROTTMAN

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Lauren Nicole Smith, D.V.M.

lauren.smith@zootampa.org

(813) 935-8552 Ext. 5247

Education

Texas A&M University, College of Veterinary Medicine, College Station, Texas
Doctorate of Veterinary Medicine, May 2010

Sam Houston State University, Huntsville, Texas
Bachelor of Science in Biology and Minor in Chemistry, May 2006
Summa cum Laude with Highest Honors

Work Experience

ZooTampa at Lowry Park October 2015-present
Department of Veterinary Services Tampa, Florida

- Staff Veterinarian
- Works with head veterinarian with management and supervision of long term preventative medicine program to include parasite surveillance procedures and controls, immunization, infectious diseases screening, dental prophylaxis, birth control, humane euthanasia standards, and regular physical examinations
- Implements and oversees quarantine program to include clinical and laboratory tests for disease
- Makes daily rounds to review health of animal collection; confers with animal keepers
- Examines sick or injured animals and wildlife, and performs necessary medical procedures including surgery, radiography, and other required treatments
- Performs necropsies, written post mortems, follow-up studies, and tests on animals in collection
- Conducts medical research relevant to health requirements of collection
- Responds to calls for emergency medical assistance
- Coordinates and supervises permanent animal marking/identification system
- Maintains medical records (MedArks) including diagnosis, prescribed medications, and other relevant data

University of Florida, College of Veterinary Medicine July 2013-July 2015
Department of Large Animal Clinical Sciences Saint Petersburg/Tampa, Florida
Aquatic Animal Health Division

- Aquatic Animal Health Intern (2-year program)
Co-Directors: Michael T. Walsh, D.V.M. and Thomas B. Waltzek, D.V.M., Ph.D.
- 2nd year: The Florida Aquarium- medical and surgical management of collection animals (reptiles, amphibians, teleost, elasmobranchs, and variety of mammal species including river otters and ring-tailed lemurs), and rescue/rehabilitation of chelonians
Staff Veterinarian/Supervisor: Kathy Heym, V.M.D.
Tropical Aquaculture Laboratory- diagnostic necropsy and bacteriology, water quality, consultation with local fish farmers, aquaculture facility site visits, help teach aquaculture workshop for farmers and students
Supervisors: Roy Yanong, V.M.D. and Deborah Pouder

Work Experience, continued

- 1st year: Florida Fish and Wildlife Marine Mammal Pathology Laboratory- marine mammal response/transport, manatee health assessments, necropsy, and independent research
Supervisor: Martine de Wit, D.V.M., Dipl A.V.B.P. (Avian)
Tampa's Lowry Park Zoo- clinical work included medical management and surgery of collection animals and rehabilitation of rescued manatees
Staff Veterinarian/Supervisor: Ray L. Ball, D.V.M.
Clearwater Marine Aquarium- clinical work primarily included physical exam and medical care of cetaceans (including rehabilitation), medical management and surgery of chelonians

Madison Veterinary Hospital September 2011-June 2013

- Associate Veterinarian, Small Animal/Small Exotics Madison, Alabama
Medicine and Surgery
- Caseload included dogs, cats, small mammals, birds, and reptiles
- Practice Owner: Patrick Gorman, D.V.M.

VCA Sacramento Animal Medical Group July-September 2011
Sacramento, California

- Relief Veterinarian, General Practice and
Emergency Medicine
- Medical Director: Catherine Grinstead, D.V.M.

VCA Sacramento Veterinary Referral Center July 2010-July 2011
Sacramento, California

- Small Animal Rotating Intern
- 1 year internship with rotations in Critical Care, Emergency, General Practice, Oncology, Surgery, Neurology, Cardiology, Ophthalmology, Internal Medicine and Dermatology
- Didactic training complete with daily hospital rounds, Grand Rounds presentations, Journal Club, staff clinician lectures/labs, and end-of-program Intern project presentation
- Intern Director and VCA Regional Hospital Director: Kari Moore, D.V.M., DACVECC

The Marine Mammal Center April-May 2011
Sausalito, California

- Volunteer veterinarian/Extern
- Experience with husbandry, surgery, anesthesia, medical management, record-keeping and necropsy of pinnipeds; beach necropsy of humpback whale
- Staff Veterinarian: Bill Van Bonn, D.V.M.
- Supervising Veterinarians: Drs. Deborah Fauquier, D.V.M., Nicola Pussini, and Vanessa Fravel, D.V.M.

Gulf World Marine Park August 2009
Panama City Beach, Florida

- 4- week Externship
- Gained experience with chelonian medicine/surgery/anesthesia
- Gained marine mammal medicine experience with bottlenose and rough-toothed dolphins including neonatal care, husbandry and rescue/rehabilitation
- Staff Veterinarian/Supervisor: Lydia Staggs, D.V.M.

Work Experience, continued

Texas A&M College of Veterinary Medicine

May 2007-August 2007
College Station, Texas

- Summer Veterinary Student Research Fellow
- Project: “Geostatistical analysis of DNA damage in oysters, *Crassostrea virginica*, in Lavaca Bay, Texas”
- Mentor: Wesley Bissett, D.V.M., Ph.D.

Harbor Branch Oceanographic Institution,
Division of Marine Mammal Research and Conservation,May-August 2006
Ft. Pierce, Florida

- Summer Intern
- Assisted blood collection and performed in-house complete blood count/serum chemistry for health-assessment study of wild bottlenose dolphins in the Indian River Lagoon
- Research project: “Investigation into the Hematological and Biochemical Analytes of the Atlantic Bottlenose Dolphins (*Tursiops truncatus*) of the Indian River Lagoon: Comparisons of Blood Parameters and Laboratory Quality Control”
- Mentors: Gregory Bossart, V.M.D., Ph.D. and David Kilpatrick, D.V.M.

Research and Publications

Smith, LN., Waltzek, TB., Rotstein, DS., Francis-Floyd, R., Walsh, MT., Wellehan, JF., Gerhold, R., Chapman, AE, de Wit M. 2016. Disseminated toxoplasmosis *Toxoplasma gondii* in a wild Florida manatee *Trichechus manatus latirostris* and seroprevalence in two wild populations. *Diseases of Aquatic Organisms*. 122(1): 77-83.

Smith, L., de Wit, M., Rotstein D., Ball, R., Gerlach, T., Kinsel, M., Rodriguez, M. 2015. Reproductive neoplasms in wild and long-term captive female Florida manatees (*Trichechus manatus latirostris*). *Journal of Zoo and Wildlife Medicine*. 46(4):895-903.

Bissett, W., **Smith, L.,** Thompson, J., 2008. Geostatistical analysis of DNA damage in oysters, *Crassostrea virginica*, in Lavaca Bay, Texas. *Ecotoxicology*.18:1, 69-74.

Conference Presentations

Smith, L., Ball, R. Significance of SDMA in Evaluating Renal Insufficiency in Rehabilitated Wild Florida Manatees (*Trichechus manatus latirostris*). International Association of Aquatic Animal Medicine, Virginia Beach, Virginia.

Smith, L., Heym, K., Yanong, R., Han, S. Management of a Submandibular Mass in a Gulf Flounder (*Paralichthys albigutta*). International Association of Aquatic Animal Medicine, Chicago, Illinois.

Smith, L., Gerlach, T., Arnett-Chinn, E., Maldonado, N., Ball, R. Lateral Digit Amputation at the Proximal Interphalangeal Joint in an Okapi (*Okapia johnstoni*): Surgical Technique and Outcome. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation*. October 2014.

Smith, L., de Wit, M., Rotstein, D., Ball, R., Gerlach, T., Kinsel, M., Rodriguez, M. Reproductive Neoplasms in Wild and Long-Term Captive Female Florida Manatees (*Trichechus manatus latirostris*). American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation*. October 2014.

Conference presentations, continued

Ball, R., Walsh, C., Flewelling, L., Arnett, E., **Smith, L.**, Barratclough, A., Gerlach, T. Clinical Pathology, Serum Brevetoxin and Clinical Signs of Florida Manatees (*Trichechus manatus latirostris*) during the Brevetoxin Related Event in Southwest Florida 2013. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation by R. Ball.* October 2014.

Gerlach, T., Conner, B., **Smith, L.**, Barratclough, A., Ball, R. Coagulation Profiles in Novel Species: A Research and Diagnostic Tool for Zoo and Aquatic Animal Medicine. American Association of Zoo Veterinarians Annual Conference, Orlando, Florida. *Oral Presentation by A. Barratclough.* October 2014.

Smith, L., de Wit M., Francis-Floyd, R., Walsh, M., Waltzek, T., Wellehan, J., Gerhold, R., Su, C., Chapman, A. Disseminated Toxoplasmosis and Serologic Survey for *Toxoplasma gondii* in the Wild Florida Manatee (*Trichechus manatus latirostris*). 39th Annual Eastern Fish Health Workshop. Shepherdstown, West Virginia. *Oral Presentation.* May 2014.

Flanagan, J., **Smith, L.**, Clubb, F. Hypertrophic Cardiomyopathy with Congestive Heart Failure in an Eastern Lowland Gorilla. American Association of Zoo Veterinarians Annual Conference, Tulsa, Oklahoma. *Cardiovascular Pathology Workshop Oral Presentation given by L. Smith.* October 2009.

Smith, L., Flanagan J., Smith, L., Clubb, F. Hypertrophic Cardiomyopathy with Congestive Heart Failure in an Eastern Lowland Gorilla. American College of Veterinary Pathologists Annual Conference, San Antonio, Texas. *Poster Presentation.* November 2008.

Additional Training

Sarasota Dolphin Research Program
Dolphin Health Assessments

May 2014
Sarasota, Florida

- Volunteer Veterinarian
- Physical exam, patient monitoring, phlebotomy
- Coordinator: Deborah Fauquier, D.V.M., MPVM, Ph.D.

Marvet- Marine Veterinary Medicine
Mote Marine Laboratory

June 2008
Sarasota, Florida

- Two-week workshop in aquatic animal veterinary medicine
- Coordinator: Raymond Tarpley, D.V.M.

Additional Training, continued

AVMA Veterinary Leadership Experience
Washington State College of Veterinary Medicine

June 2007
Ross Point, Idaho

- Interactive curriculum designed for development of leadership skills and personal growth for veterinary students and faculty

Memberships

American Veterinary Medical Association
International Association of Aquatic Animal Medicine
American Association of Zoo Veterinarians

DIANA SZOKE

(b) (6)

EDUCATION

St. Petersburg College
Clearwater, FL
September 2007-May 2010

EMPLOYMENT HISTORY

ANIMAL CARE PROFESSIONAL
ZooTampa at Lowry Park
September 2013-Present
Tampa, FL

- Provide animal husbandry for a wide variety of African Hoofstock, Carnivores, and a few avian species.
- Encourage natural behaviors through enrichment and constantly incorporate positive reinforcement training.

FARM ATTENDANT
Horse Power for Kids, Inc.
February 2013- September 2013
Tampa, FL

- Animal husbandry for a variety of species
- General maintenance of enclosures

CULINARY
Busch Gardens Florida
June 2011- January 2016
Tampa, FL

- Provide personalized service to all guests.
- Prepare meals, stock stations, and keep working area clean and organized

OFFICE MANAGER
KETCH K9 Training
September 2008-June 2011
Tampa, FL

- Incorporate positive reinforcement training with all canines
- Managed billing, receiving, booked appointments, class preparation, etc..

MANAGER
Tijuana Flats Burrito Company
June 2007-July 2008
Pinellas Park, FL

- Supervised staff. In charge of scheduling, training, and new hire interviews.
- Managed customer relations and provided exemplary service to all guests

ZOO ATTANDANT
Busch Animal Outpost
March 2007-September 2007
Dade City, FL

- Provide animal husbandry for a variety of African Hoofstock
- General maintenance, repairs, and grounds keeping

VOLUNTEER EXPERIENCE

ZooTampa at Lowry Park
June 2012- April 2013

- Assist keepers in daily animal care (ex. Feed, enrichment, clean...)
- Observe training sessions, animal observations, assist in side projects.

Equestrian Inc., Tampa, FL
November 2011-June 2012

- Animal Husbandry, daily enrichment, grooming, and foot care for all horses
- General maintenance of stalls and property

CERTIFICATIONS

PADI Open Water Scuba Certified

NATALIE BEACHAM THOMPSON

TAMPA, FL.

(b) (6)

EXPERIENCE

ZooTampa at Lowry Park, Tampa, FL

2018 - Present

Nonprofit zoo dedicated to the rescue, rehabilitation and care of animals and connecting people with wildlife and each other.

Animal Care Professional

October 2018 – Present

Assist with the general husbandry and care of animals in the Florida Mammals collection.

- ◆ Prepare and distribute approved animal diets and assist with the training and maintenance of husbandry behaviors for assigned animals.
- ◆ Closely monitor animal behavior, appetite, mobility and waste production and maintain accurate daily records.
- ◆ Assist in animal procedures including crating and veterinary procedures.
- ◆ Initiate and complete area projects with supervisor's approval.
- ◆ Clean, maintain and inspect animal areas, including exhibit and off-exhibit areas daily.

Dolphin Connection, Duck Key, FL

2010 – 2018

Marine mammal facility specializing in interactive programs with bottlenose dolphins designed to inspire conservation.

Assistant Supervisor of Animal Training

November 2016 – September 2018

Provided leadership to trainers and support to the Facility Manager in all areas of animal training and care, guest experience, education, daily business operations, animal management, and staff training.

- ◆ Assisted with the creation and implementation of new program structure, resulting in increased participation and attention of all animals during interactive programs.
- ◆ Acclimated animals to new environments and social settings, including transport between facilities utilizing active and passive restraint.
- ◆ Served as Special Needs Coordinator, planning and facilitating interactions for guests with special needs.
- ◆ Administered medication and treatments to animals as necessary.
- ◆ Communicated with management regarding animal behavior and facility information daily.

Senior Trainer

July 2014 – November 2016

In addition to performing the duties of trainer/photographer, oversaw assigned areas of advancement and supervised junior training staff.

- ◆ Collaborated with the senior training team to create and maintain daily enrichment program.
- ◆ Performed inspections and necessary maintenance or repairs of facility grounds and animal areas, including underwater habitats with the use of SCUBA equipment.
- ◆ Trained and maintained complex behaviors utilizing operant conditioning.
- ◆ Maintained animal, facility, and business records daily and input to computer database.

Trainer/Photographer

July 2010 – July 2014

Responsible for daily animal care including training, diet preparation, cleaning, and water testing.

- ◆ Assisted guests with reservations, viewing photos, and purchasing retail items.
- ◆ Led classroom discussions designed to engage guests and encourage conservation efforts.
- ◆ Conducted guest interactive programs with collection of Atlantic bottlenose dolphins.
- ◆ Operated and maintained professional cameras and associated photography equipment.
- ◆ Mentored interns.

PRIOR PROFESSIONAL EXPERIENCE

Disney's The Seas

Lake Buena Vista, FL

Aquarium at Walt Disney World specializing in research and education.

Marine Mammal Intern

January-June 2010

Prepared diets for Atlantic bottlenose dolphins and West Indian manatees, assisted with dolphin cognitive research sessions, vacuumed and cleaned manatee habitat daily, created and delivered educational and research presentations, recorded diet and behavioral data of manatees.

Mote Marine Laboratory & Aquarium

Sarasota, FL

Independent, not-for-profit marine research organization and aquarium.

Manatee Care Intern

May-July 2008

Fed and cared for resident West Indian manatees, maintained trained behaviors of manatees, assisted with data collection for ongoing scientific research projects, designed and conducted research project focused on manatee vocalizations, created and built environmental enrichment device for manatees, utilized clicker training for rescued green sea turtle training sessions.

National Resource Center for Cephalopods

Galveston, TX

Marine laboratory specializing in the culture of cephalopods for the biomedical research community.

Intern

January-May 2008

Provided daily care for several species of cephalopods and fish, maintained aquatic life support systems, monitored and recorded behavior of all animals, collected, sorted and prepared live feed for resident animals.

EDUCATION

Bachelor of Science Degree *Marine Biology***Texas A&M University**

Awarded May 2009

SKILLS, CERTIFICATIONS, & ASSOCIATIONS

- ◆ SCUBA certified
- ◆ Associations of Zoos & Aquariums (AZA) member
 - ◆ Microsoft Office & Publisher proficient
- ◆ International Marine Animal Trainers' Association (IMATA) member
- ◆ Compiled the 'Back to Basics' column for IMATA's *Soundings* magazine

Jaime Vaccaro

(b) (6)

Jaime.Vaccaro@ZooTampa.org

EDUCATION

University of Michigan, Ann Arbor, Michigan
Bachelor of Science in Biology
August 1996- December 2000

PROFESSIONAL EXPERIENCE

Animal Care Supervisor, Florida Mammals Department
October 2018- Present

ZooTampa at Lowry Park
Tampa, Florida

Senior Animal Care Professional, Florida Mammals Department
March 2008-October 2018

ZooTampa at Lowry Park
Tampa, Florida

- Provide critical care for sick, injured and orphaned manatees at the David A. Straz, Jr Manatee Critical Care Center
- Responsible for the rehabilitation and release of the Florida manatee
- Perform observation, monitoring and overnight care to manatees
- Assist Florida Fish and Wildlife in the rescue and relocation of manatees in a field setting
- Participate in the monitoring of tagged manatees with Sea 2 Shore Alliance
- Educate visitors thru daily keeper chats and the surrounding community thru school presentations
- Scuba dive in manatee habitats for daily cleaning
- Provide husbandry, enrichment, training and medical care for a variety of native Florida wildlife including Black Bear, Panther, Red Wolves, and several other mammals, birds and reptile species
- Assist in exhibit design and construction
- Experienced in animal introductions
- Knowledgeable in Hurricane preparations

Temporary Animal Care Professional, Florida Mammals Department
April 2007- September 2007

ZooTampa at Lowry Park
Tampa, Florida

- Provided general care to a variety of Florida Wildlife
- Participated in the rehabilitation and release of the Florida manatee

Senior Animal Care Professional, Primate and Sea Lion Department

May 2002- April 2007 and September 2007- March 2008

Audubon Zoo

New Orleans, Louisiana

- Responsible for the daily husbandry, enrichment, training and care of a diverse collection of primates, including Great Apes
- Experienced in animal transport and introduction
- Participated in the hand-rearing of 1.1 Colobus monkeys
- Developed the Shadow the Keeper Program for the Audubon Zoo's AAZK Chapter
- Daily visitor interactions, including keeper chats and Sea Lion shows
- Skilled in filtration and water quality of primate and Sea Lion habitats
- Applied operant conditioning techniques to scale train Golden Lion Tamarins and to perform medical behaviors on a blind female Sumatran Orangutan
- Assisted with the crate training of 1.1 Tapirs for transportation and injection training of 1.1 Manned Wolves
- Assisted Veterinarians with animal health procedures
- In charge of overall pest control for the primate area
- Travelled monthly, following Hurricane Katrina, to Moody Gardens in Galveston, Texas to maintain sea lion behaviors
- Hurricane Team member

Wildlife Intern

January 2002- May 2002

Species Survival Center,

New Orleans, Louisiana

- Aided keepers in the husbandry of exotic animals including Felids, Storks, Cranes and Antelope
- Assisted in the Artificial Insemination of Mississippi Sandhill Cranes
- Participated in the costume rearing of Mississippi Sandhill Cranes chicks

Florida Mammals Department, Keeper Assistant Intern

July 2001- October 2001

ZooTampa at Lowry Park

Tampa, Florida

- Assisted keepers in the husbandry of a variety of Florida mammals and birds
- Acquired knowledge of manatee rescue and rehabilitation techniques
- Partook in weekly dives within the manatee habitat

Marine Mammal Intern

January 2001- July 2001

John G. Shedd Aquarium

Chicago, Illinois

- Aided in the husbandry of Pacific White-Sided Dolphins and Beluga Whales
- Performed marine mammal enrichment and observations
- Diet Preparation

Oceanic Marine Mammal Research Foundation Volunteer
May 2000- June 2000

Netherlands, Amsterdam

- Engaged in sailing duties throughout the Atlantic Ocean
- Indulged in active learning of marine species and their environment

SKILLS AND ACTIVITIES

- Crane, Lull and Lift certifications
- Open water and rescue diver certifications
- AED, CPR and First Aid certified
- Medal of Valor Bronze recipient, October 2015
- ZooTampa Employee of the month February 2012 and April 2016
- Audubon Zoo Employee of the month February 2005
- San Diego Zoo Global Academy Liaison for ZooTampa
- Inaugural Animal Welfare Committee member for ZooTampa
- Weapons team member trainee
- Presenter at ABMA Conference 2016
- Presenter at the National AAZK conference in Chicago, IL 2006
- Presenter at ZooTampa's first annual keeper week mini- conference
- Published articles in the AAZK Forum, AAZK insight, and the Audubon Zoo's enrichment pamphlet "The Browser"
- President of the AAZK New Orleans Chapter from May 2005- April 2008
- Vice President of the AAZK New Orleans Chapter from November 2005- May 2005
- Skilled in conference preparations- assisted in the organization of the 2005 National AAZK Conference in New Orleans, LA (cancelled due to Hurricane Katrina)
- Crossed trained in the husbandry care of a variety of species in the Africa area of ZooTampa



Barry, Anna <anna_barry@fws.gov>

FW: back-up veterinary coverage

2 messages

Teresa Calleson <teresa_calleson@fws.gov>

Fri, Feb 15, 2019 at 1:22 PM

To: Anna Barry <anna_barry@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>

Cc: Jay Herrington <Jay_Herrington@fws.gov>, Larry Killmar <larry.killmar@lowryparkzoo.org>, Leeann Rottman <leeann.rottman@lowryparkzoo.org>

Hi Anna, Mary and Pam,

This morning, the North Florida Ecological Services Office (NFESO) received the email correspondence below from Dr. Killmar at ZooTampa. Just letting you know that Jay and I have discussed and that we are fine with Dr. Killmar's suggestions for backup veterinary services. I'm familiar with all of the Sea World vets, Dr. Walsh (Univ of Florida), and both Dr. Persky and Dr. Jafarey from the Jacksonville Zoo and can supply their resumes/CVs, if needed. All of their resumes/CVs are part of their individual facility's packages (sent to Anna) as part of the ongoing permit renewal process. All are qualified manatee vets and should meet the requirements to provide critical care veterinary services as backups for this facility. Typically, during the Letter of Authorization process, I believe that the Division of Management Authority (DMA) typically requests that I have the facility provide you with the written documentation of these arrangements (i.e. contracts, agreements, etc.) but I will defer to how you see best to proceed from this point, as the permitting entity, for the US Fish and Wildlife Service. For example, Dr. Walsh also has such an agreement with Clearwater Marine Aquarium. Thanks so much and thanks to Dr. Killmar for providing these alternative vets for consideration! With DMA being the permitting entity, NFESO would like to request that DMA provide your response regarding the alternative veterinary arrangements to ZooTampa staff as soon as possible. Thanks!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Larry Killmar [mailto:Larry.Killmar@ZooTampa.org]

Sent: Friday, February 15, 2019 9:53 AM

To: teresa_calleson@fws.gov; Jay_herrington@fws.gov

Cc: Larry Williams (larry_williams@fws.gov); Joe Couceiro; Pardo, Michelle; Leeann Rottman; Lauren Smith; Dold, Chris

Subject: [EXTERNAL] back-up veterinary coverage

Jay and Terri, I have been in discussions with Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, about providing Dr. Lauren Smith, with back-up veterinary services for manatee care from his staff, if the need arises. He has agreed

and asked that I contact you and receive the services endorsement to that effect. SeaWorld's staff would be in addition to Dr. Mike Walsh and the veterinary staff of the Jacksonville Zoo, Dr. Meredith Persky and Dr. Yousuf Jafarey, who will serve in that same capacity. As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

ZooTampa.org | Facebook | Twitter | YouTube



Consider the environment;

Think before you print!



Cogliano, Mary <mary_cogliano@fws.gov>
To: Anna Barry <anna_barry@fws.gov>

Wed, Feb 20, 2019 at 8:17 PM

Hi Anna,

Given the below, tomorrow lets discuss how we move forward from here.

Thanks,

Mary

[Quoted text hidden]

--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

2 attachments



image001.png
17K



image002.png
2K

Complaints about ZooTampa vet's manatee malpractice total 45, including one that blames him for giraffe deaths too

Self-described "rogue veterinarian" began drawing complaints in 2010, and one former employee says zoo officials knew about problems in 2012 but did nothing.



Ray Ball, the ZooTampa veterinarian under investigation for medical malpractice that may have killed manatees, did not have federal permission to conduct experimental treatments of injured marine mammals, according to a spokeswoman for the U.S. Fish and Wildlife. [ZooTampa]

◯ ◯

By [Craig Pittman](#)

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TAMPA — At least seven people filed 45 complaints with federal officials about a ZooTampa veterinarian currently suspended from treating manatees over allegations of malpractice, according to documents obtained by the *Tampa Bay Times* on Friday.

The complaints about Ray Ball cover eight years, starting in 2010.

One complainant was a former zoo employee who said she reported her concerns about Ball to the zoo's top officials in 2012, and they did nothing. She said that Ball's odd medical treatments affected more than just manatees.

"Dr. Ball changed several diets of animals within the collection with no consultation with a nutritionist," former 10-year zoo employee Tanya Ward wrote in a 2018 email to federal officials. "These included giraffe, lemurs,

orangutans and mandrills. We lost five giraffes due to what I believe was the diet change that Dr. Ball quickly implemented."

A second former zoo employee, Virginia Edmonds, provided the agency with a rundown of nine manatees that Ball treated that did not survive rehabilitation for various reasons she attributed to him. The reasons ranged from using an unsterilized needle that caused an infection to failing to provide nutrition to an injured manatee that wasn't eating.

At one point, she wrote, he accidentally stuck a needle into a manatee's lungs during a procedure called a "chest tap" and left it there, causing buoyancy problems. "This manatee became a talking point for not hitting the lung while doing chest taps," she wrote.

One of the complaints from 2012 accuses Ball of lying about a manatee named Maggie that needed care because it had trouble floating. The complaint says Ball told his staff that he had consulted with a state manatee biologist and another zoo official, and the three of them agreed the only thing to do was to euthanize Maggie.

Afterward it turned out neither of the people Ball said he consulted was aware of the decision to kill the manatee, and a subsequent exam showed that its condition was not fatal, the complaint said.

The complaints were compiled beginning in 2017 by two U.S. Fish and Wildlife Service manatee biologists who passed them along to the agency's permit reviewers last May. Not until October did the federal reviewers notify zoo officials that these "credible reports" required an investigation, and that Ball must "cease all activities involving manatees." The zoo's own permit for treating and exhibiting the marine mammals may be in jeopardy, the agency's letter to ZooTampa said.



[PRIOR COVERAGE: ZooTampa vet accused of manatee medical malpractice.](#)

"Because of the nature of the questions posed, Dr. Ball will be on paid administrative leave while we review veterinary care procedures and gather the information needed," the zoo's CEO, Joe Couceiro, said in a statement last fall when the *Times* first reported on the investigation.

The agency's letter focused on only four concerns about Ball, and did not indicate the wide range of complaints that had been made or the time span. The documents released to the *Times* include a spreadsheet with a summary of all 45 complaints, as well as a 63-page report with details of each one and emails from the two former employees.

After the agency's letter, the zoo arranged to have three manatee experts — all former SeaWorld employees with extensive experience — examine the medical records related to those four concerns. While the experts said he did not appear to have violated any care standards, they found that he deviated from standard medical care for manatees and that the reasons he cited "appear to reflect mere opinions ... and are not backed by meaningful scientific data or studies."

[PRIOR COVERAGE: Manatee experts question treatment by ZooTampa vet.](#)

Ball, who described himself as a "rogue veterinarian" last year in a self-published memoir, did not respond to a request for comment Friday. Neither did Couciera and other officials of the zoo, which was previously known as the Lowry Park Zoo. Zoo director Larry Killmar denied last fall that zoo officials had ever been told of any complaints about Ball prior to the federal agency's letter.

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[PRIOR COVERAGE: Controversial vet called himself "rogue" in book.](#)

According to the documents provided to the *Times*, the people who complained about Ball included two other veterinarians and an aquarium director. They are not named in the documents, although one of the veterinarians was Martine de Wit, who oversees the state's Marine Mammal Pathology Laboratory in St. Petersburg. De Wit had complained about Ball's decision to lop off a manatee's injured flipper and then turn it loose into the wild without further treatment, a step he took against her advice.

DeWit said she had also read through the full list of complaints, which she said were "all from experts in their field with many years of manatee experience and knowledge. I think the statements speak for themselves, and there is no need for me to comment on what is appalling."

The federal agency's questions about Ball, and his subsequent suspension last fall, came at a particularly awkward time for the zoo, which has been caring for injured and ill manatees since 1991. Its David A. Straz, Jr. Manatee Critical Care Center was about to reopen after being shut down for a year for a taxpayer-funded \$3 million upgrade to the manatee tank's water filtration system. Meanwhile a 14-month-long Red Tide algae crisis meant that the need for manatee rehabilitation facilities was acute.

Gil McRae, who heads of the Florida Fish and Wildlife Research Institute in St. Petersburg, said this week that the state's main concern is trying to get that state-financed facility open and caring for manatees again.

"Our interest is in getting them online again because we helped them refurbish it," he said.

Contact Craig Pittman at craig@tampabay.com or . Follow [@craigtimes](#).



CRAIG PITTMAN

Environment, Growth and
Development Reporter

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Barry, Anna <anna_barry@fws.gov>

new Tampa Bay Times article - ZooTampa issue

1 message

Teresa Calleson <teresa_calleson@fws.gov>

Fri, Feb 15, 2019 at 3:46 PM

To: Jay Herrington <Jay_Herrington@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>, Anna Barry <anna_barry@fws.gov>, Chuck Underwood <chuck_underwood@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>

FYI

<https://www.tampabay.com/environment/complaints-about-zootampa-vets-manatee-malpractice-total-45-including-one-that-blames-him-for-giraffe-deaths-too-20190215/>

Names of complainants apparently not redacted before the release of the statements and spreadsheet by FWC under Sunshine Law...

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

[7915 Baymeadows Way, Suite 200](#)

[Jacksonville, Florida 32256-7517](#)

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

In the field of animal care, one is taught to have complete faith in the veterinarian. In the course of one's career, you become accustomed to different philosophies, treatments, and procedures as you encounter different doctors in different environments. Overall these changes are taken on good faith in the DVM's education and experience. However when such changes are counter intuitive to one's own experience and begin to negatively impact the collection, it is only logical to question the source.

Dr. Ball has implemented changes in diets, treatment plans and diagnoses that has resulted in an overwhelming number of negative results. It is due to these issues that I have lost confidence in the ability of Dr. Ball to effectively oversee the health and wellbeing of the animals in his care. The following are documentation of events that have precipitated the erosion of Dr. Ball's credibility.

Jennifer Galbraith

Senior Animal Care Professional

Florida Mammals Department

Manatee Critical Care Team

ZooTampa at Lowry Park

5 November 2010- 102844- "Madison"- entanglement
Pectoral fin extremely swollen from crab trap. Staff's request to provide treatment that had been successful in the past was denied. Other than initial antibiotics no other treatment provided. Animal cleared for release, even though on Health Assessment document notes that nailed has chronic irritation, open with dermis exposed. Pictures taken at Pre Release Health Assessment support this statement. See supporting document #1 and #2

30 January 2011- 102885- "Trop" Orphan calf- cold stress- 170# Attempted bottle feeding for 1 week, no tubing, no fluids, animal gets weaker and dies

8 April 2011- 102907- "Colada"- resolving pneumothorax dependent calf. Based on visual exam diagnosed with kidney issues. No treatment done. Healed on her own, released in good health

Comment [JG1]:

12 May 2011- 102916- "Frieda Ghates"- on arrival, recommended euthanasia. Asked by staff to delay. Released in good health 24 Aug 2011

20 June 2011- 102926- "Suwannee"- Pneumothorax- excessively buoyant, uncomfortable and unable to eat. Keeper staff requested chest tap but were refused for 7 days, Dr. Ball wanted to just monitor animal's condition. Once tap was done animal responded well, began eating and released in good health

25 June 2011- 102929- Pneumothorax- declined after chest tap that perforated lung. Euthanized 6 July 2011

13 August 2011- 102938- "Hernando"- possible pneumothorax, radiographs performed and diagnosed with a non-functioning left lung. Animal showed no physical signs of that injury, ate well entire stay, released in good health.

14 August 2011- 102939- "Lovelee"- Pneumothorax- Animal began eating, became uncomfortable. Denied

request to tube fluids. One chest tap performed. Unsuccessful. Animal euthanized after 5 days of admittance

5 March 2012- 102981- "Maggie" presented with negative buoyancy issues. Exploratory chest tap scheduled, no other diagnostics had been done. Dr. Ball told staff that he had talked to Andy Garrett (FWC) and Virginia Edmonds (Florida ACM) and all had agreed euthanasia was the better option. Euthanasia performed. Neither Andy nor Virginia were aware of this and had not agreed. Necropsy did not confirm animal's condition was terminal

8 May 2012- 103003- "Dana"- pneumothorax-

Due to the excessive examples of malpractice in regards to this animal, the details are included separately with supporting documents. She was subjected to poor medical care standards, which caused her to die unnecessarily. See supporting document #3 and #4

17 July 2012- 103020- "Smoochie" Pneumothorax- After chest tap, animal is no longer buoyant but does not use

the water column, very common as they regain lung capacity. After 2 days Dr. Ball determined animal should be euthanized, and scheduled procedure to coincide with staff from the path lab coming for another reason. Due to dissent from FLM staff and path lab staff, euthanasia not performed. Animal released in good health.

5 February 2013- 103060- "RSW1306"- Pneumothorax-
Animal died immediately after chest tap

14 February 2013- 103061- "Amour" juvenile manatee, emaciated and lethargic. Produced feces with monofilament. Dr. Ball believed the animal to have West Nile. Staff persisted with requests for fluids and treatment for G.I. issues. Animal died

7 July 2013- 103097- "Jobin" orphan- bottled fed Collostrix starting on 11 July, though all recommendations are to only use this for one day, this animal was bottle fed only Collostrix until September 9th. In this time the animal did not defecate until July 26th, was insatiably hungry and showed slower cognitive

response than other calves. Drowned on Nov 20th cause of which is unknown. See supporting document #5

8 July 2013- 103098- "RNW1308"- Pneumothorax- died during chest tap

31 October 2013- 103118- "Skullee"- Pneumothorax- 3 chest taps performed. Animal died. Necropsy showed the lung had healed from its initial injury, but had two newer punctures presumed from the chest taps. See supporting document #6

19 December 2013- "103137"- Twinkle"- rescued for G.I. related issues, emaciated, buoyant in hind end. No treatments done for 5 days in which time the animal did not eat, produce gas, or defecate. Animal started on fluids December 24th, began eating on Dec 26th and made full recovery

18 April 2014- 103167- Goodcharlotte- pneumothorax- Euthanized after chest tap. Necropsy showed viable lung but perforations from chest tap

21 May 2014- 103174- "Bobafloat" Pneumothorax-
Euthanized after several chest taps. Necropsy showed a
viable lung but perforations from chest tap

11 November 2014- field amputation

Statement and pictures provided separately.
See supporting documents #7 and #8

5 December 2014- 103215- "Sota" Cold Stress-

Began to eat right away and produce good gas and feces.
Initially slow to use the water column but got better
every day. After being in the hospital for 25 days,
radiographs were performed and Dr. Ball diagnosed her
with pneumonia. Though she showed no clinical signs
and was improving every day Dr. Ball began an
experimental Nebulizer treatment on her. Every day she
was locked in a channel connecting the pools, the
channel was covered in plexi-glass and antibiotics were
pumped into the air. After 22 days based on an
ultrasound, Dr. Ball declared her cured. All clinical

observations were the same before as after the treatment

14 May 2015- 103261- "Camlee"- orphan

Though not a newborn and presumed to have nursed prior to being orphaned, Colostrix colostrum supplement was prescribed as formula. Calf refused all attempts at feeding this and staff was able to argue to try Esbilac. Calf responded well.

14 July 2015- 103271- "Marmalade"- orphan-

Having G.I. issues adjusting to Esbilac formula, this is very common when hand rearing. Radiographs taken and when reviewed by Dr. Ball he stated that he believed this calf had an obstruction and should be taken to surgery. It was explained to him that she had been passing feces and gas since she arrived and that she most likely would not survive that surgery. He countered that the obstruction was probably a ball of monofilament and when she moved it acted like a ball valve sometimes allowing things to pass and other times acting as a blockage. It was requested that no drastic measures be taken until all traditional ways of solving this had been exhausted. That same day he sent emails to colleagues at Blue Pearl and Dr. Barratclough DVM to discuss

scheduling for this procedure. Again he was urged to wait. Marmalade worked through her G.I. issues and was released in good health

25 January 2016- 103302- Furbie- orphan calf, possible boat strike & cold stress-

Radiographs performed and manatee diagnosed with a broken back. No treatment prescribed. Animal never showed any clinical signs of that condition. No follow up radiographs performed. Animal released in good health

15 February 2016- 103312- "Leesburg"- cold stress

Did not eat for five days after arriving and fluids not provided in that time. Fluids started on 6th day. She began eating shortly after, then fluids discontinued. Her food intake decreased and she began to display symptoms of G.I. issues including caudal buoyancy. Based on visual exam Dr. Ball felt that she had a decomposing fetus and it was causing the gas build up. No diagnostics done, the gas resolved in a couple of days and she was released in good health.

8 June 2016- 103332- "Shay"- Pneumothorax

No interest in food for 2 days. Tubed fluids for 2 days. Still no interest in eating and no fluids provided for 14 days. Manatee continued to decline and was euthanized on 7 August 2016

17 August 2016- 103346- "Ostega"- Pneumothorax

Went 8 days without eating before fluids provided. After extensive fluid therapy, she began to eat and made a full recovery

21 August 2016- 103348- Pneumothorax-

Dr. Ball assumed manatee had an abscess and lanced it. It immediately released a continuous stream of air. Every time manatee inhaled the area would retract into the body cavity. In order to prevent water from entering the incision, Dr. Ball took a rubber top from a blood tube and glued it into the opening. Manatee died on 25 August 2016

24 October 2016- 103357- "Emoji"- orphan

Diagnosed with a blood clotting disorder. Experimental Heparin therapy begun. Calf began bleeding internally and injections ceased. Was on a very conservative feeding plan that did not appear to provide him with enough energy to sustain activity. Did not survive

15 March 2017- 103377- pneumothorax-

Obviously pregnant. Did not eat and no fluids offered even though dry docked two times in that time span for chest tap, blood draws, and injection. Died on 20 March 2017

10 May 2017- 103388- "Pascow"- boat strike laceration

Traumatic tail injury and trapped in a canal with dependant calf. She did not eat for 9 days and did not receive fluids for 7 days. Once fluids began, eating picked up. Released in good health

17 July 2017- 103399- "Toodles"-Pneumothorax-

Did not eat for 25 days. She was not provided fluids for 20 days though in that time she was dry docked 6 times for injections, blood draws, and chest tap. Fluids began

on 5 August and she began to eat on 11 August. She continued to do well and was released.

8 August 2017- 103404 "Marshmallow"- Pneumothorax-

No fluids provided, no eating, no treatment for 4 days and that was a pain injection. Manatee died that same day.

Manatee ID LP2102844 Manatee Name: _____

Date: 5 Nov 2010

FREEZE BRAND	Letters/Numbers applied:	<u>N/A</u>	Applied by:
	Location:		
BLOOD	Stick #	Start Time	End Time
	1		Flipper L / <u>R</u>
	2		L / R
	3		L / R
	Drawn by: <u>vet staff</u>		
	# Tubes of Blood Collected	Blue:	Red:
		Green:	Yellow:
			Purple:
			Other:
PIT TAG	Scanned for previous PIT tag?	<u>Y</u> / N none	PIT tagged at this capture? Y / N
	PIT tagged by:		
	Right #	<u>0 0 - 0 6 7 1 - D F 2 D</u>	
	Left #	<u>0 0 - 0 6 7 1 - C E E C</u>	
FLAG	Color and Symbol		
TELEMETRY	TAG Type	Argos-GPS / Lotek-GPS / PTT / VHF	
	Tag ID#		
	Tag / Antenna Color(s)	Tag:	Antenna:
	VHF Frequency	164. _____ MHz	
	Tag Sonic ID: FWC _____	Freq: _____ kHz	Code: _____ PI: _____ msec
	BELT Number / Belt Color	FWC _____	Color: _____
	Belt Sonic ID: FWC _____	Freq: _____ kHz	Code: _____ PI: _____ msec
	Belt Knot / Webbing Exposed	Left / Right _____ inches	
	CR2a Programmed Release	Y / N Date/Time: _____	
	DATA LOGGERS	Tidbit (Temp.)	TDR (Depth)
	Manufacturer	Onset	Salinity
	Logger ID Number		Star-Oddi
	Logger Location		
	dTag ID & VHF Frequency	ID #: _____	148. _____ MHz
	dTag Orientation Angles	dTag Pitch: _____ °	dTag Roll: _____ °
	Reference Orientation Angles	Ground Pitch: _____ °	Ground Roll: _____ °
	TETHER Strength / Length	Strength: _____	Length: _____ ft.
	Tether Sonic ID: FWC _____	Freq: _____ kHz	Code: _____ PI: _____ msec
	Tagged by:		
PHOTOGRAPHS	Taken by:	<u>de Wit</u>	
	Exposures:		
SKETCHES	Sketched by:	<u>de Wit</u>	

Comments

entanglement scar ⓐ ⓑ elbow. Left flipper bigger (swollen) than ⓐ. Nailbed has some chronic irritation, open w/dermis exposed, surrounded by thickened epidermis.



0.1 Manatee 103020

"Dana"

- 8 May, 2012- female manatee weighing 2380lbs was rescued and brought to the manatee hospital. She showed signs of a recent boat strike and symptoms of a punctured lung. Dr. Ball Was not present. Vet tech Heather Henry gave injection
- 14 May- gave birth to a still born calf
- 15 May- injection and fluids. No food consumption for 7 days
- 17 May- First chest tap attempted. No radiographs were taken, so multiple taps were needed To determine the correct placement to remove the most air. No measures were taken To prevent outside bacteria from entering the chest cavity through these injection Sites.
- 19-22 May- another chest tap is performed on the 19th and by the 22nd the air has been removed And Dana is able to submerge. She is also starting to consume small amounts of food.
- 23- May- First abscess begins to appear on her back. Food consumption increases.
- 2- June- After eating well for ten days, her food consumption starts to decline. The abscess is getting Larger. She has received no antibiotics in 10 days.
- 7- June- Eating continues to decline. First abscess is tapped. Two more have started to form. Antibiotics given.
- 8- June- First abscess tapped again as well as two new ones.
- 11-June- Continue to clean out abscesses daily. Dr. Ball consulting Vet intern, Dr. Nicco on the Abscesses states that he, Dr. Ball, introduced the bacteria that caused them through the Chest taps.
- 12-25 June- Daily wound care on lanced abscesses continues. Manatee is now tubed fluids daily due No food consumption.
- 26- June- A fourth abscess has formed and is now being treated
- 29-2 July- unable to treat. Having given her access to the display pools in the hope of stimulating her Appetite, Dana did not come back to the treatment area during this time.
- 3-July- Able to secure Dana in the medical pools again. Dr. Ball was hesitant to give her anymore Injections, including antibiotic. We asked about oral meds and he agreed. However the drug He brought was the injectable (Exenel). When questioned about giving this as an oral , instead of the other antibiotics usually given orally. He stated "I'm breaking new ground". Again we questioned the use of a drug in an unproven manner. He dismissed our concerns And administered the drug anyway.

Out of concern for the manatee that was given this treatment we conducted our own research. Pfizer, who makes the product, does not recommend giving it orally under any circumstances and in some cases it is actually illegal to do so. Though the Veterinary Extra Label Use Act does give some leeway for using this drug other than prescribed, some of the requirements to do so were not met.

- 7- July- Dana begins to have trouble breathing and is unable to sustain herself in a full pool of water. She is separated into a separate med pool set at a shallow depth. She continues to receive Fluids due to lack of food consumption. Dr. Ball has also continued to give her oral Antibiotics that are designed to be given as an injectable.
- 8- July- Based on an observation that this new set of symptoms, (high respirations, unable to use the Water column) were similar to another manatee, Dr. Ball began to treat Dana for a heart Condition
- 10-July- after 27 days of not eating and only getting fluids. Dr. Ball agreed to using a grain mixture to

Tube feed her some nutrition.

14- July- Dana dies

It was determined in her necropsy that there was infection in her lung. The amount of infected material removed from her lung is not enough to have been there prior to her being in the hospital. This leads one to believe that if proper Veterinary procedure had been followed than possibly Dana might have been saved.

Subject: Excenel RTU Inquiry
From: VMIPS (VMIPS@pfizer.com)
To: [REDACTED]
Date: Tuesday, August 14, 2012 10:05 AM



August 14, 2012

Dear Ms. Galbraith,

Thank you for your inquiry regarding Excenel RTU. According to the **Cephalosporin Order of Prohibition on Extra Label Use of Cephalosporins** enacted by the FDA in April 2012, the oral administration of Excenel RTU would be illegal.

Veterinary Medical Information and Product Support

Pfizer Animal Health

800-366-5288

Colostrum Replacers

- **What are colostrum replacers?**
 1. Single dose package of dry powder.
 2. Mixed with warm water.
 3. Fed at the same time one would feed colostrum.
 4. Contain variable amounts of antibodies (depends on manufacturer). The antibody (globulin protein) content of one package may vary from 100 to 150 grams.
 5. The nutritional profile is highly variable depending on the manufacturer (fat may vary from 12 to 25 percent, crude protein from 40 to 45 percent on a dry matter basis).
 6. Cost is usually about three times that of a colostrum supplement.
- **Colostrum supplements** (for example: Lifeline, Colostrix, First Defense) are NOT colostrum replacers. They have little if any nutritional value. The antibody (globulin protein) content may be as little as 12 grams.
- **Tips for colostrum replacer use**
 1. Always mix thoroughly. I recommend a food mixer or blender for the best results rather than trying manually mix the replacer with a whip.
 2. Always use the amount of water recommended by the manufacturer. This gives the proper concentration of antibodies.
 3. Always use warm water. Follow the manufacturer's recommended temperature. Recommendations vary from 105°F to 130° (40° to 55°C).
 4. Do not mix with milk or colostrum regardless of the manufacturer's directions. The dry matter concentration of this mix will be too high for optimum antibody absorption and digestion.
 5. Always feed as soon as possible after birth.
 6. If using an esophageal feeder for calves that cannot suckle, be sure they are in an upright position.
- **Examples include** (this list is not inclusive and does not constitute endorsement):
 1. Acquire/Secure is manufactured by American Protein Corporation. It is made from plasma and labeled to contain 125 gm of globulin protein.
 2. Calf's Choice Total is manufactured by Saskatoon Colostrum Company and distributed by Alta Genetics USA. It is made from bovine colostrum and labeled at three levels, 100, 125 and 150 gm of globulin protein.
 3. Land O' Lakes colostrum replacer is manufactured by Saskatoon Colostrum Company and distributed through Land O' Lake marketing channels. It is made from bovine colostrum and labeled to contain 100 gm of globulin protein.
 4. Rite Start Complete calf colostrum replacer is manufactured by MS Specialty Nutrition. It is of bovine origin and labeled to contain 100 grams of globulin protein.

Florida Mammals

From: Virginia Edmonds
Date: Thursday, November 21, 2013 4:36 PM
To: Florida Mammals
Subject: FW: LPZ103118

Thoracocentesis = chest tap

From: deWit, Martine [<mailto:Martine.deWit@MyFWC.com>]
Sent: Thursday, November 21, 2013 4:31 PM
To: Trevor Gerlach; Ray Ball; Smith, Lauren; Virginia Edmonds
Subject: LPZ103118



Hi, quick debrief on the findings on this manatee.

The right pleural cavity was compromised, but not in the "traditional way". There was fibrin reaction and 1.5 L of brown fluid, not purulent. The right lung was probably not functioning great, it was very firm, but it was not collapsed or consolidated. There was a large amount of air in this pleural cavity. One area along the primary airway that was indented and probably the leak, but it appeared sealed with hemorrhagic tissue and some pleura. There were two other small lesions that may have been from thoracocentesis? Interestingly, there was no massive ribtrauma. The rib heads corresponding with the suspected leak area had some hemorrhagic tissue, and a sharp indentation but no bone fragments or fractures. The muscle part of the hemidiaphragm looked very abnormal and thickened, will be interesting to see what the histopath shows. The thoracocentesis puncture may have gone through, there was hemorrhage on the abdominal aspect of the hemidiaphragm and on the ventral peritoneum. All in all, not a crystal clear picture on what the exact problem was on gross pathology. Obviously the pneumo was an issue, but the lung lesion appeared to be healing, not closed already. Complicating factor was probably pregnancy, she had a small calf (48 cm long). The fetus looked in ok condition, my guess is that it died around the same time.

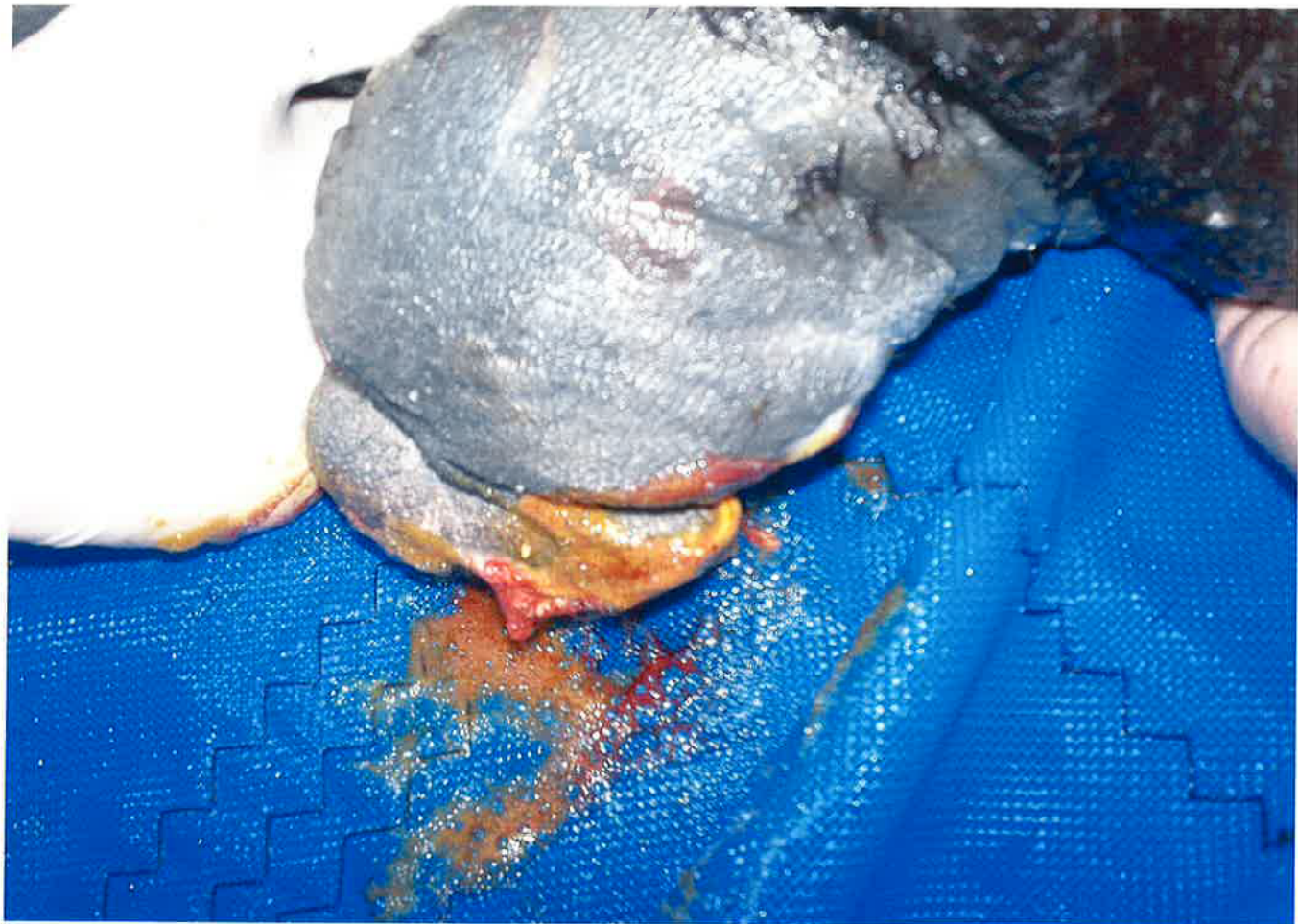
Lauren, histo samples may need some explanation when trimming, so probably best to wait until I am back to help with that.

Let me know if you have any questions! Martine.

On November 11, 2014, I accompanied Dr. Ray Ball DVM to assist FWC biologists in a manatee rescue. A dependent calf with its mom was entangled in a crab trap line and buoy. After extensive effort the cow was caught and brought on the boat but the calf got out of the net. The cow was transported back to the beach for processing and the rescue effort continued for the calf. The calf was caught on the next set and brought to the beach. The entanglement had caused extreme damage to the calf's right pectoral fin and Dr. Ball felt that it would need to be amputated. At the same time I noticed the calf's left pec was rigid and immobile. It was tucked under the body and could not be moved. I brought this to the attention of Dr. Ball and it was dismissed.

Due to the extensive injury to both of the calf's pecs and since the extremely large cow was already in the transport truck, it seemed logical that we would take them to Lowry for care. However Dr. Ball insisted on doing a field amputation on the calf, giving it a shot of antibiotics, and letting it go. I protested that the calf without use of one pec and missing the other should go to the hospital to ensure its ability to maneuver in the water. Dr. Ball countered that it had been doing fine so far it should be fine now. I again protested that the calf had been attached to buoy's which were acting as a flotation device and it would be prudent to take the pair in for at least observation. No one else supported my argument and the female was offloaded from the truck and they were released back into the water.

Pictures included



walshm@ufl.edu; andy.m.stamper@disney.com; (b) (6)
elizabeth.c.nolan@disney.com; chrisvet@dwazoo.com; (b) (6)
To: gwen.myers@columbuszoo.org; wildvet@coqui.net; mark.campbell@cincinnati.org;
(b) (6); nicole_adimey@fws.gov; scott.gearhart@seaworld.com;
susan.lowe@dep.state.fl.us; art.yerian@dep.state.fl.us; martine.dewit@myfwc.com

From: ray.ball@lowryparkzoo.com

Subject: RE: Manatee updates form LPZ and HSSWP

Thanks Mike, I do appreciate the support.

We had intubation equipment ready but I have not used nor needed an endoscope to do this so far, so no that was not around. We did have oxygen and a demand valve and I thought that reasonable. We were all prepared for the potential reality that this was a moderate to high risk procedure with a possible loss but given the value of the information we hoped to obtain, it was worth that risk.

Ventilation compromise is certainly the cause of death but it does sound like there was a pre-existing cardiomyopathy as well. This drug combination is one I have used in fit animals, and with her release planned pending the outcome of the biopsy, I did make certain bold assumptions about her fitness too.

Thanks and look forward to the follow-up regarding her next week,

Ray

From: Walsh,Michael T [mailto:walshm@ufl.edu]
Sent: Monday, August 29, 2011 5:43 PM
To: Ball, Dr Ray (Zoo Vet); Andy Stamper; Antonio Rivera; Beth Nolan; Chris Bonar; David Murphy; Gwen Myers; Luis Figueroa-Oliver ; Mark Campbell; Maya; Nicole Adimey; Scott Gearhart
Cc: Lowe, Susan; Yerian, Art; deWit, Martine
Subject: RE: Manatee updates form LPZ and HSSWP

Hi Guys,

Sorry for the delays in responding to Ray's e-mails. I want to thank him for being so open in the face of Amanda's loss and feel he is being very professional in his approach with the group. I think we

should consider that some drug combinations while promising may not be as desirable in an animal with physical compromise and unknown age and health issues. I would recommend that someone like this have all equipment needed for intubation and placement on a machine including a scope to enhance the chances of intubation. This species has shown it is very durable but as we try other drugs on compromised individuals we should be ready for any problems. Her fat and muscle issues, the potential for a contribution from unknowns and the use of these drugs that may result in profound sedation, as you describe, require the need for intubation. Detomidine as an Alpha II is not particularly heart friendly and if muscle perfusion is decreased then the reversals may not be effective. This is not a case of heart failure but more likely a case of ventilation compromise.

Sincerely,

Mike

From: Ball, Dr Ray (Zoo Vet) [mailto:Ray.Ball@LowryParkZoo.com]

Sent: Thursday, August 18, 2011 8:05 AM

To: Andy Stamper; Antonio Rivera; Beth Nolan; Chris Bonar; David Murphy; Gwen Myers; Luis Figueroa-Oliver ; Mark Campbell; Maya; Walsh,Michael T; Nicole Adimey; Scott Gearhart

Cc: Lowe, Susan; Yerian, Art; deWit, Martine

Subject: Manatee updates form LPZ and HSSWP

Catching up on a few recent events at the two parks:

Amanda was sedated Tuesday for biopsy of mammary mass of the right. She was induced with 9mg detomidine and 9mg butorphanol IM and her most recent weight was 2450#. Good induction but at 10 minutes the depth of her respirations became weak. She was given 2 doses of 5mg atipamezole IM a few minutes apart while the biopsy was taken. The procedure appeared to have been painful as she did react once the mammary tissue itself was cut. Oxygen was pulsed to her on her own breaths and then was had a ET tube placed nasally, but not truly intubated. The depth of her respirations continued to weaken and she was given more atipamezole and naltrexone IV. HR was strong and steady at 48/min. 20 minutes from the injection she became completely apenic and was given dopram. HR picked up to about 60/min but then her corneal reflex was gone and her heart stopped 30 minutes from the injection time about 950am.

Martine has the post mortem details and has already mentioned some the significant findings. We will get the mammary biopsy processed and she has expedited the histopath so we will have this all by FMT. Cause of death was obviously anesthetic related.

RSW1123 arrived last Sunday with old scar across back, buoyant on the right side. Good attitude and

eating at first but was slowed and anorexic yesterday. Rads are attached.

RNW1110 male with very superficial wound and swelling associated with them is clinically stable but has very high CK, P, low Ca. Very tough male to deal with right now so a somewhat conservative approach is being taken. Rads to follow.

Art/Susie,

I will get you more detailed clinical notes for your records ASAP.

Beth/Mike,

I will also send you anesthesia report if you would like too.

Thanks

Ray L Ball, DVM, MRCVS

Director of Medical Sciences

Tampa's Lowry Park Zoo

1101 W. Sligh Avenue

Tampa Fl, 33604

Ray.Ball@LowryParkZoo.com

813-935-8552 Ext 349

Summary of issues with manatee "Roosevelt" at Homosassa Springs Wildlife State Park:

Homosassa Springs Wildlife State Park admitted their first acute care manatee named Roosevelt on Feb 20, 2017. The manatee was rescued in nearby Three Sisters Spring in Crystal River suffering from cold stress. The manatee's condition was deemed "acute" when brought to HSWSP. However, the manatee was not seen or treated by the contract vet on a daily basis. Clinical notes indicate that the manatee was placed in the channel and swam into the in-ground pool near heat source. Indication from Dr Ball's notes is that manatee is approximately 18% underweight for it's length. By March 23rd, clinical notes indicate improvement and that they can start considering release. Note of that date also indicates he was eating both hay and romaine.

On 4/27/17 HSWSP submitted a reimbursement attachment to FWC indicating that Roosevelt was still receiving acute care at the park which seemed strange since acute care means the manatee is in imminent danger or dying without the care and the manatee was not receiving daily veterinary care. The FWC contract manager questioned that and was told via email that "Dr Ball does state that "Roosevelt" is acute care only". FWC processed the invoice with that information. For the purposes of reimbursement, acute care days are worth more financially than medically necessary days. On 5/23 an MMPL staff member noted Facebook postings indicating the manatee had been given free range of both warm pool and spring habitat during most of its convalescence which was not in line with it receiving acute care treatment. The manatee was released on 5/22/17. Subsequently, HSWSP was asked to provide a revised invoice with the number of acute care days reduced and the difference in reimbursement to HSWSP was subtracted from a future invoice.



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MyFWC.com/Research

Mrs. Terri Calleson
US Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

21 May 2018

Dear Mrs. Calleson,

With this letter, I am sharing my concerns about the treatment of severely entangled manatee flippers by Dr. Ray Ball in the field.

Historically, treatment of severely entangled manatee flippers followed that of trauma medicine and veterinary practice standards. Manatees with open, bleeding wounds that have bone exposed would be admitted to rehabilitation for treatment. Over the past few years, Dr. Ball has instituted a treatment where flippers that cannot be saved are removed through surgery in the field, and the manatees are released on site. There has been extensive discussion on flipper amputations in the manatee veterinary group, and there is consensus that field amputations could be the treatment of choice when the flipper wound is in advanced stage of 'self' amputation, with little or no bone exposed, no active hemorrhage, or if there are confounding factors like a dependent calf. However, there are two examples of manatees with active wounds with significant hemorrhage and bone exposed, which, in my opinion, and consistent with previously followed procedures, could have benefitted from additional care in rehabilitation, other than the triage and short-term treatment provided on site. After an adjustment phase, most manatees do well in a captive setting, and I don't think concerns over transfer and transition to a managed pool outweigh the benefits of providing veterinary care. Please note that we do not have any documentation of post-release wound healing in these animals, nor have them documented as carcasses.

Below are details on the cases of concern.

RNW1505. Active entanglement wound of right flipper. This adult, single female self-amputated her flipper during the net capture. The wound was actively bleeding shortly after the capture, and left a large portion (~ 3 inch) of bone exposed. The manatee was released with the wound pictured below.





RNW1719. Active entanglement wound of right flipper in adult single female. The remainder of the intact flipper tissue was surgically cut after capture. The wound was open, bleeding (note blood-stained water in first picture) and the manatee was released with the wound as shown in the pictures, with more than an inch of bone exposed.







Thank you for your attention to this matter. Please do not hesitate to contact me with any questions about these cases.

Sincerely,

A handwritten signature in black ink, appearing to read 'Martine de Wit'.

Martine de Wit, DVM

martine.dewit@myfwc.com

Cel (b) (6)



Mrs. Terri Calleson
US Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

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MyFWC.com/Research

21 May 2018

Dear Mrs. Calleson,

Included is a cd rom with the following reports that were requested by the Service.

HS8601 Amanda

The manatee had impaired health from heart disease, reproductive tumors, and obesity, but cause of death (COD) was determined as human-related because primary cause was death under anesthesia.

HS8695 Lorelei

The manatee died with a cecum impaction. The carcass was too decomposed to determine whether diet was the primary cause, or chronic disease impaired digestion of the coarse diet. Regardless, in my opinion, the consumption of coarse roughage played a role in Lorelei's death.

LPZ102885 Trop

Rescued with severe cold stress. The skin lesions were one of the most severe we have seen, I often reference pictures from this case.

LPZ102929

Euthanized. There was extensive tissue damage from chronic watercraft injury.

LPZ102939 Lovelee

This manatee was to be euthanized but died right before the procedure. Cause of death was a chronic watercraft injury with a diaphragmatic hernia.

LPZ102981 Maggie

An old well-known female with a long photo-ID sighting history from Crystal River. She was euthanized due to poor prognosis and poor condition including severe respiratory distress. Concerns by USGS about the euthanasia were discussed in the vet group. Based on necropsy findings of heart disease and the severe respiratory compromise, I supported the euthanasia as in best interest of the individual animal.

LPZ103003 Dana

Died from chronic watercraft injuries, including a pyothorax.

LPZ103060

Rescued with severe chronic watercraft injuries, and died the day after.

LPZ103061 Amour

Died from natural causes. Was suspected to have lesions associated with fishing line ingestion, but cause of death was an enteritis associated with parasites.

LPZ103097 Jobin

This juvenile manatee did not have any specific disease or lesions that caused death. The manatee drowned, and based on history from animal care staff, it was determined most probable that he accidentally drowned during rough interaction with a pool mate. There were later discussions where it was suggested that this animal was obese, but we did not determine that on necropsy and found it otherwise healthy. Regarding the body condition of rehabilitating orphaned calves, the Manatee Rehabilitation Partnership guidelines set a certain weight requirement for release of captive-raised orphaned calves. Oceanaria usually do not restrict food intake of calves, to promote their growth and even release them with a 'reserve' for when they adapt to the wild. Recently, young manatees in the care of Zoo Tampa and Homosassa Springs Wildlife State Park have been kept on the lean side, which has raised concerns over animals not making weight for release, and possible challenges for when they fast during their adaptation phase post-release. It is my understanding that this new diet regime comes from the theory that obesity in juvenile manatees can lead to juvenile diabetes. I would like to reiterate that on necropsy, we have not been able to find any signs of diabetes in such cases (in addition to "Jobin", the "Myakklamore" cause of death was cold stress due to behavioral failure of adaptation to the wild).

LPZ103098

Death was determined to be related to acute watercraft injury. The manatee died during thoracocentesis, during which the lung was slightly nicked (1 mm lesion), but this is not unusual and the lesion had no significance in the cause of death.

LPZ103118 Skullee

The manatee was rescued for positive buoyancy and a watercraft wound. Death was presumed to be from complications of the injury. Most lesions were soft tissue, and microscopic changes were dramatic.

LPZ103121 Floatrida

Died of complications from a chronic watercraft injury.

LPZ103167 Goodcharlotte

Euthanized. Necropsy findings included severe kidney damage from chronic watercraft trauma.

LPZ103174 Bobafloat

Euthanized. The manatee had a chronic pneumothorax without any obvious pleural leaks at necropsy. Cause of death was chronic watercraft.

LPZ103183 Buoyance

There is no record of this manatee in the manatee mortality database.

LPZ103190 Trouble

Euthanized. The manatee had an inflammatory reaction in one of the pleural cavities from rib trauma and a chronic watercraft injury.

LPZ103332 Shay

Euthanized. The manatee had healing watercraft injuries.

LPZ103339 Claro

Euthanized. There were complications (infection) from chronic watercraft trauma.

LPZ103348

Died of complications from watercraft injury. In addition to the chronic lesions, there were fresh ones from wound treatment.

LPZ103357 Emoji

This calf was necropsied by LPZ.

LPZ103377

Died of complications of from chronic watercraft injury.

LPZ103404 Marshmallow

Died of watercraft trauma with a pneumothorax.

RNW1412

This was the rescue of a dependent calf with a deep entanglement of the flipper. The flipper amputation was with little bleeding and approximately 25% of the wound had developed scar tissue. The rescue happened in November, away from primary warm water sites, and because of the critical timing in the calf's learning of warm water migration, it was considered in the best interest of the individual to receive a field treatment and be released on site. Calf behavioral development outweighed the risk of wound complications.

RNW1505

This adult female self-amputated her entangled flipper during capture, and during the boat ride back to the mainland I had to apply constant pressure to the stump because of the active bleeding. A relatively large portion of bone was exposed in the open, raw wound. The manatee was single and had no indication of full-term pregnancy (vulva was not distended). I requested admission into rehabilitation for

further treatment but my request was overruled and the manatee was treated and released on site.

RNW1719

This adult, single female self-amputated her entangled flipper during capture. I was not present for the rescue, since I distanced myself from any flipper entanglement rescues with Dr. Ball since my experience with RNW1505. Pictures are provided to illustrate the rawness and bleeding of the wound.

Please do not hesitate to contact me with any questions about the attached reports, or any other manatee cases in FWC's records.

Sincerely,

A handwritten signature in black ink, appearing to read 'Martine de Wit', with a long horizontal stroke extending to the right.

Martine de Wit, DVM

martine.dewit@myfwc.com

Cell (b) (6)

The following manatees did not survive rehabilitation

LPZ 102981 Maggie

- Discussion among Vet and Manager to do further diagnostics on this manatee. On the morning of further diagnostics, the diagnostics were not conducted and the manatee was euthanized without discussion with Manager. This led to a communication and signing policy about euthanasia

LPZ103097 Jobin

- Maintained on a colostrum formula for a month. The formula should only be offered within the first 24 hours.
- died from drowning, but diagnosed with diabetes

LPZ 103003 Dana *see attached note*

- use of an unsterilized needle resulted in the introduction of infection that resulted in a pyothorax, euthanized

LPZ 103121 Floatrida

- hit the lung during chest tap and the animal became more buoyant. euthanized

LPZ 103167 Goodcharlotte

- euthanized for a pythorax, but a pythorax was not found at the necropsy and the animal did not exhibit signs of a pythorax

LPZ 103183 Buoyance

- A pneumothorax that became more buoyant after a chest tap because the needle hit her lung and was left there. This manatee became the talking point for not hitting the lung during chest taps.

LPZ 103190 Trouble

- inexperienced, unsupervised Veterinary intern left to treat manatee and take blood resulted in a traumatic treatment and the animal was later euthanized

LPZ 103339 Claro

- severe propeller wound, emaciated, and nursing a calf. She was not eating, but was not prescribed any nutritional supportive care initially. She was euthanized.

LPZ 103332 Shay

- not eating and was not prescribed nutritional supportive care. Euthanized

Dana 103003

July 3, 2012

- Dr. Ball administered the antibiotic Excede orally to 0.1 manatee, Dana
- He stated that offering it was "experimental". We have never used exceed orally. We have only used this drug IM
- When asked if there would be any negative effects, he stated "No"
- The administration of this antibiotic is meant to be intramuscular
- The MSDS for this drug states that ingestion could cause anemia, diarrhea, vomiting and nausea
- The antibiotic is water insoluble, so it most likely will not be absorbed and the infection fighting capabilities will not have effect
- We have used oral antibiotics with manatees that have proven effective

Staff present: Dan Costell, Ashley Poole, Michelle Anger, Virginia Edmonds, Marcus Kowitz, Jennifer Galbraith, Tanya Ward, Molly Lippincott

Virginia Edmonds

On several occasions, during the chest tap procedure, Dr. Ball and Associate Vets, would hit the lung of the manatee with the needle that was being used to remove the air from the chest cavity. When this happens, blood, air and the surfactant from the lung comes through the syringe. On more than one occasion, Dr. Ball has left the needle in the lung and has not expressed concern. However, after those incidents, each of the manatees has filled with air beyond the size of their original pneumothorax pre-tap. One of the most recent and telling cases was manatee 103183.

On November 17, 2014, I spoke with Dr. Ball about manatee chest tap procedures. I mentioned that myself and the staff were not comfortable with the lung being hit with the needle during the tap.

Dr. Ball was receptive and said he had already been thinking about it. The conversation lasted 5 minutes and he mentioned not going in so far with the needle.

Sincerely,
Virginia

Virginia Edmonds
Animal Care Manager of Florida Mammals
Tampa's Lowry Park Zoo
1101 West Sligh Avenue
Tampa, Florida 33714
813-935-8552 ext 273
Lowryparkzoo.org

at least two
manatees: 103174,
103167
Were euthanized
based on their lack
of response to
treatment. At their
necropsies, it was
determined their
lungs were healing
and the air that
continued to fill could
have been the result of
the needle in the lung.

5/23/17 Florida manatee (*TRICHECHUS MANATUS LATIROSTRIS*) 103369
Female Gleewood 167.8 Kg (370 Lb)

Problem: MANATEE HOSPITAL ADMISSION ; MANATEE CONVALESCENT CARE ;
MANATEE

HEALTH ASSESMENT

Performed health assessment today. Animal has reportedly been doing well with good appetite.

BCS 3/5, round ventrum. Appears well. Obtained blood from right pectoral flipper and placed Pit tags. wt= 370lbs (168.18kg). SL= 206cm, UG= 152cm. Obtained ultrasound fat measurements. Based on BCI per Chip, she is within normal range but less than median BCS for

wild

female manatees.

A/P: Blood work pending. Animal has gained 100# since admit in January. No clinical issues presented at this time, continue to monitor animal's BCI/condition. (LS)

Florida manatee (*TRICHECHUS MANATUS LATIROSTRIS*) 103369
Female Gleewood

This morning gleewood was found in with the hippo in the adjacent habitat. She was on her back in a trough and unable to right herself.

Staff able to move her on a back board designed and housed there without any problems. Respirations stable during this at about 1/min.

Some superficial scrapes noted but nothing deep. Stable and quiet when I arrived. Symetrical superfical scrpaes on lateral aspects of body wall that correalt well with the trough she was in. Thermal images of whole body as well as palaption revela no warmCollected bloods and gave ketoprofen. Repeated SL and Umb girth and revised numbers are more sensible; SL 223cm and Umb girth 161cm.

Printed on: 7.Oct.2017

/ISIS/MedARKS/5.54.i

7

7.Oct.201

Clinical Notes - Daily Activity

Log

LOWRY PARK ZOOLOGICAL GARDEN

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Florida manatee (*TRICHECHUS MANATUS LATIROSTRIS*) 103369
Female Gleewood

thes efigures calculate to 218kgs and her actuall weight is 220kgs. these figures then trasnlate into BCI of 21.2. Normal range but less than median.

Returned to springs and swam away normally.
Bloods show CK over 3500 and consistent with soem muscle damage
A: Soft tissue/muscle damage from her struggle in recumbency and perhaps some from the inretactions with the hippo. As measured by the CK this damage is consistent with soem capture and blunt trauma. her movemenst at release are normal so no structural damage apparent.
P:Monitor her condition thru weekend and repsond as needed. Expect she will be sore for a few days and even anorexic but should recover well. Adjustmenst already in place for the expected strom surge tonight and permanent ones planned afterwards. (RLB)

From: Ray Ball [mailto:Ray.Ball@LowryParkZoo.org]
Sent: Friday, December 08, 2017 1:41 PM
To: Junge, Randy; Croft, Lara (Lara.Croft@SeaWorld.com); Magdalena Rodriguez; Mike Walsh; Dr. Ashley Barratclough (vetashley@dwazoo.com); Martine deWit; Meredith Persky (perskym@jacksonvillezoo.org); Dave Murphy; Stamper, M. Andy; elizabeth.c.nolan@disney.com
Cc: Melissa Nau; Lauren Smith; Teresa Calleson; Garrett, Andy
Subject: Homoasassa updates

We have just finished the pre-release exams with Melody from Sea to Shore on Camlee, Neuson, Gleewood, and Marmalade. All of the manatees have gained weight, have good body scores, and nothing in the labs looks concerning. Neuson had higher WBC but it looks like a stress response to us as he was difficult again to manage and we did not sedate him.

Gleewood 570#
Neuson 610#
Camlee 740#
Marmalade 684#

Everybody except Marmalade was fitted with their practice belts and are wearing them without any issues now. I have medically cleared them all and do not expect Marmalade to have any issues getting to the 600# criteria for release.

This group, along with Cayo, are eating 5% of their body weight in romaine, free choice coastal/timothy hay, a few flakes of alfalfa at times, and all the natural vegetation they want. There is always food left over in each of the pens.

Thanks

Ray

*Ray L Ball, DVM
Senior Veterinarian
Director of Medical Sciences*

At 3:45 pm on 8/21 Dr. Ball informed us that a watercraft injured manatee was in route to the zoo with an estimated time of arrival being 6:00pm. Sometime between 4:00 and 4:30pm he called on the radio to say the arrival time had changed to 6:30pm and that he would be leaving grounds to run some errands but would be back in time for the arrival of the injured animal.

At 6:11 the FWC truck arrived with the manatee, as we were opening the truck for initial assessment I said I would let Dr. Ball know they were here. Anna from FWC informed me he had let her know he had a flat tire and would be late, for us to proceed until he arrived.

An hour later after unloading the manatee I got my phone to check in with Dr. Ball. I had a text from him at 6:13pm stating he was at Whole Foods in North dale and had a flat tire. At 6:56pm I had another text from him saying he had more issues and his wife was coming to get him. I updated him on the manatee and he responded that he would take care of him the next day.

Jennifer Galbraith

Virginia Edmonds

103357

From: Ray Ball
Sent: Monday, November 21, 2016 3:31 PM
To: Andrea Alava; Christina Lasso; Virginia Edmonds
Subject: RE: Emoji

Sure, give me a call at 349. I am out the next 3 days and back on Friday.

From: Andrea Alava
Sent: Monday, November 21, 2016 3:29 PM
To: Ray Ball; Christina Lasso; Virginia Edmonds
Subject: RE: Emoji

Hi Dr. Ball,

This is so great! We have a received a request from The Dodo/Huffington post to do a piece on Emoji. Would you be available to discuss this project this afternoon? There are some sensitivities among these media outlets.

Hi Virginia – we would love to have you be a part of this project. Would you be available to discuss this project this afternoon?

Thanks so much!
Andrea

From: Ray Ball
Sent: Monday, November 21, 2016 3:25 PM
To: Andrea Alava <Andrea.Alava@LowryParkZoo.org>; Christina Lasso <Christina.Lasso@LowryParkZoo.org>; Donnie Gallagher <Donnie.Gallagher@lowryparkzoo.org>
Subject: Emoji

Emoji has regained the weight since his "crash" recently. He is taking bottles of fluids with a very small amount of formula. He has also started to eat the romaine some and to me this is very encouraging. He is getting more antibiotics tomorrow and we will recheck bloods.

His recent radiographs do not suggest a foreign body concern (plastic bag) and that is why we did not do the CT.

Thanks

ray

*Ray L Ball, DVM
Senior Veterinarian
Director of Medical Sciences
Tampa's Lowry Park Zoo
1101 W Sligh Avenue
Tampa Fl 33604
813 935 8552 ext 349*

This CT scan was going to be for media purposes and not for the interests of the manatee.

From: Ray Ball
Sent: Thursday, March 02, 2017 2:34 PM
To: Virginia Edmonds; Larry Killmar; Leeann Rottman; Chris Massaro; Andrea Alava
Cc: Ruth Meyers; Heather Henry; Lauren Smith; Melissa Nau; Melissa Nau; Michelle Devlin; (b) (6) Ryan O'Shea
Subject: Manatee Hoth

In looking at Hoth's (the manatee from Panama City) ECG it does look like his heart is enlarged. Our next thought would be Echocardiology. Our table is just not solid enough for a manatee that size so I have asked Dr Walsh at UF to come down with the cardiologist who did the original work with us when Trevor was here. It will take some time to organize that and that will allow the pool work to finish up.

I will also invite the vets from both Jacksonville and Mote as we try to help them with their capacity building. I will let everyone know when we get details.

If he does have a cardiac insufficiency that would explain why he may not have been fit enough to return to warm water (he is a known animal from Crystal River) and contribute to the cold stress he has incurred.

Thanks

ray

*Ray L Ball, DVM
Senior Veterinarian
Director of Medical Sciences
Tampa's Lowry Park Zoo
1101 W Sligh Avenue
Tampa Fl 33604
813 935 8552 ext 349*

Virginia Edmonds

From: Ray Ball
Sent: Wednesday, September 07, 2016 6:54 AM
To: Virginia Edmonds; Melissa Nau; Lauren Smith; Heather Henry; Michelle Devlin; Ryan O'Shea; Larry Killmar; Leeann Rottman; Chris Massaro; Debbie Halin; Dan Costell; Angela Belcher; Mike Burns; Melinda Mendolusky; Julie Tomita; Josh Caraballo; Ashley Todd; Tiffany Burns; Jessica Grace; nicomalpr@yahoo.com; Florida Mammals
Subject: RE: Daily for 9/6/2016

Osteqa 103346

We can try fluids twice daily with some GI protectants on the female starting today, but her prognosis is very poor. She needs over 18L of fluids to meet maintenance but I am not sure her kidneys will be able to manage that if we push it. She can also drink and generate metabolic water, so the fact that her kidneys are worsening in spite of these opportunities is poor.

Not sure the channel is going to make him more comfortable; he will still be on a solid surface and if he does react poorly that can be dangerous. We can sedate him more heavily is needed to try and help him.

Thanks
ray

From: Virginia Edmonds
Sent: Tuesday, September 06, 2016 5:24 PM
To: Melissa Nau; Ray Ball; Lauren Smith; Heather Henry; Michelle Devlin; Ryan O'Shea; Larry Killmar; Leeann Rottman; Chris Massaro; Debbie Halin; Dan Costell; Angela Belcher; Mike Burns; Melinda Mendolusky; Julie Tomita; Josh Caraballo; Ashley Todd; Tiffany Burns; Jessica Grace; (b) (6) Florida Mammals
Subject: RE: Daily for 9/6/2016

Hello,

If needed, we can increase tubing fluids to 103346 to twice a day. She is not difficult to tube and does not strongly object.

We can also attempt tubing 103349 in the treatment channel. We have used the channel before for manatees that have too much discomfort on the floor.

Let us know how you feel about either manatee.

Virginia

From: Melissa Nau
Sent: Tuesday, September 06, 2016 4:53 PM
To: Ray Ball <Ray.Ball@LowryParkZoo.org>; Lauren Smith <Lauren.Smith@LowryParkZoo.org>; Heather Henry <heather.henry@lowryparkzoo.org>; Michelle Devlin <michelle.devlin@lowryparkzoo.org>; Ryan O'Shea <Ryan.O'Shea@LowryParkZoo.org>; Larry Killmar <larry.killmar@lowryparkzoo.org>; Leeann Rottman <leeann.rottman@lowryparkzoo.org>; Chris Massaro <chris.massaro@lowryparkzoo.org>; Debbie Halin <debbie.halin@lowryparkzoo.org>; Dan Costell <dan.costell@lowryparkzoo.org>; Angela Belcher <angela.belcher@lowryparkzoo.org>; Virginia Edmonds <Virginia.Edmonds@LowryParkZoo.org>; Mike Burns <mike.burns@lowryparkzoo.org>; Melinda Mendolusky <melinda.mendolusky@lowryparkzoo.org>; Julie Tomita <julie.tomita@lowryparkzoo.org>; Josh Caraballo <Josh.Caraballo@LowryParkZoo.org>; Ashley Todd

Typically would treat with aggressive fluid therapy, however sustained IV fluids are impractical in this animal. Continue oral fluids and monitoring pending SDMA results, but prognosis may be poor based on such profound progression of the azotemia. Will add on gastroprotectants to cover for gastric ulceration secondary to uremia.

ostega 103346

Rx: MAGNESIUM CITRATE 887 ml via nasogastric tube once. (MN)

CARIBBEAN MANATEE (TRICHECHUS MANATUS LATIROSTRIS) 103349

Male

Problem: MANATEE ACUTE CARE ; MANATEE HOSPITAL ADMISSION

No improvement in animal's status today and therefore elected move forward with sedation and thoracocentesis.

Upon presentation, animal was resting quietly but then was roused.

Injected with detomidine/butorphanol IM and moderate sedation noted in ~30 minutes.

Animal dry docked, would intermittently roll but able to keep him down. Obtained blood from left pectoral flipper, and elected to administer midazolam IV to help subdue him further as he was still too responsive for thoracocentesis. Administered tulathromycin Sq and Banamine SQ. Appeared in good plane of sedation.

6.Sep.2016

Clinical Notes - Daily Activity Log

LOWRY PARK ZOOLOGICAL GARDEN

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CARIBBEAN MANATEE (TRICHECHUS MANATUS LATIROSTRIS) 103346

Female Ostega

Problem: MANATEE ACUTE CARE ; MANATEE HOSPITAL ADMISSION
still not actively eating and has been observed crunching even after
banamine dose yesterday. Nasogastric tubing of ~2.5 L + 887 mL
magnesium citrate for laxative effect, since no feces have been passed
in several days. No reflux noted today, and tubing went smoothly.
Blood collected from left pectoral flipper and submitted for CBC,
chemistry, and recheck SDMA. Continue to monitor pending blood
results.

Addendum: Reviewed blood results. Total WBC (10.36 K/uL) has
increased since 9/3 sample (prev 9.59 K/uL). Azotemia has worsened
significantly, with a marked increase in creatinine (11.3 mg/dL; prev
3 mg/dL), moderate increase in BUN (32 mg/dL; prev 22 mg/dL), and mild
increase in phosphorus (6.7 mg/dL; prev 5.9 mg/dL). CK has also
increased (3368 U/L; prev 3260 U/L), indicating ongoing muscle damage.
Excretion of myoglobin from muscle damage also likely exacerbating
impaired renal function. Unknown cause of the severe progressive
azotemia, but suspect that a combination of blunt trauma to the
kidneys and myoglobinuria have resulted in impaired renal function.

appetite.

She seems tractable enough we may be able to ultrasound her bladder and see if it is(??) (RLB)

CARIBBEAN MANATEE (*TRICHECHUS MANATUS LATIROSTRIS*) 103346

Female Ostega

Problem: MANATEE ACUTE CARE ; MANATEE HOSPITAL ADMISSION

Yesterday was tubed twice as directed with a small amount of bile tinged reflux in the am and clear in the pm. NO food noted.

Outwardly appears stable and has an increased attention to the feeders

and offered feeds but still no witnessed intake.

Dispensed a dose of B-complex and lactulose as a PO supplement to see if that will help appetite. May try this for two days and if not helpful will try PO valium as an appetite stimulant. Recheck bloods later this week as planned. (RLB)

From: Tanya Ward (b) (6) >

Date: Sun, 11 Nov 2018 at 5:03 PM

Subject: Former keeper from Lowry Park Zoo

To: (b) (6)

Dear Terri,

I am writing this email on behalf of your investigation into Dr. Ray Ball, and his malpractice of manatees at Tampa's Lowry Park Zoo, now ZooTampa.

I was employed at Tampa's Lowry Park Zoo from December 2003-April 2013. As a keeper of the Florida Mammals Department, this included the David A. Straz Jr., Manatee Hospital. Working within this hospital put me in close contact with veterinary staff including Dr. Ball.

I had very strong concerns regarding the treatment of the manatees under his care. On September 26, 2012, I met with upper management regarding these issues. I felt minimal action was taken. Morally and ethically I could no longer work with Dr. Ball and I resigned in April 2013.

I deeply appreciate you taking your time to look into this matter.

Best Regards,
Tanya Ward

From: Tanya Ward <(b) (6)>
Date: Wed, 14 Nov 2018 at 2:54 PM
Subject: Former Tampa's Lowry Park Zoo keeper

Dear Terri,

I am writing this email on behalf of your investigation into Dr. Ball and his malpractice of manatees at Tampa's Lowry Park Zoo, now ZooTampa. I was employed at Tampa's Lowry Park Zoo from December 2003 - April 2013. As a keeper for the Florida Mammals Department, this included the David A. Straz Jr. Manatee Hospital. Working within this rescue, rehabilitation and release hospital I worked closely with veterinary staff including Dr. Ball. I had strong concerns regarding the treatment of manatees under his care as well as the animals within the collection.

On September 26, 2012 I and another staff member compiled a list of these concerns and set up a meeting on the given date with Craig Pugh (former CEO of Tampa's Lowry Park) and Elizabeth Hennig who is currently the Sr. VP/Chief Financial Officer. These are the concerns that were discussed in this meeting.

On May 8, 2012 we received a female manatee named Dana who had been hit by a boat and was showing symptoms of a punctured lung. On May 17th a first chest tap was attempted with no radiographs. Multiple taps were needed to determine the correct placement to draw out the air from the lung injury. A simple x-ray could have helped determine the exact location of the punctured lung/fractured rib. No measures were taken to prevent outside bacteria from entering the chest cavity through these injection sites. For example no gloves were used during the procedure nor was any sterilization performed on the site such as an alcohol/betadine scrub.

As a result Dana developed four abscesses in the following months. The first abscess appeared on May 23rd and continues to grow in size. Two more have developed by June 7th and antibiotics are finally given. At this time Dana's food consumption has started to decline. On July 3rd Dr. Ball prescribed an injectable drug (Exenel) and gave the drug orally. He stated he was "breaking new ground" when questioned about the way he was administering this drug. Upon doing research the Pfizer company responded to our inquiry concerning this drug and it stated that "oral administration of Exenel RTU would be illegal." On July 7th Dana begins to have trouble breathing and is unable to sustain herself in a full pool of water. On July 8th Dr. Ball began treating Dana for a heart condition. At this time we began to see a trend in a heart condition diagnosis being given to manatees as well as other animals in the collection. This diagnosis of a heart condition was also given in a male orangutan named "Rango"

Rango was initially reported to Dr. Ball with an ongoing cough. Dr. Ball determined that this was congestive heart failure with no diagnostic testing done. Rango was then in turn put on a drug regimen of enalapril and Lasix. Dr. Ball also changed his diet at this time. Rango began to show a decrease in appetite, weight loss, and decreased activity. Keepers voiced their concern that the dosage of the Lasix was high according to industry standards and some of his health issues appeared to be a side effect of the medications. They also expressed their concerns of the diet changes that Dr. Ball made. The keepers concerns were dismissed. Eventually Rango passed away. His necropsy showed that his heart was okay.

Along with the diagnosis of heart conditions in certain animals Dr. Ball began heart research on sick and injured manatees that came to the hospital. This research involved placing the manatee on unsafe tables and also caused the animal undue stress. I do not know if this research was approved by FWC or

not. At this time I had lost trust in Dr. Ball and he had lied to the Florida Mammal team concerning the euthanasia of a manatee named "Maggie." We were told by Dr. Ball that our supervisor Virginia Edmonds had approved for this manatee to be euthanized to later find out that she did not. The manatee was euthanized before this information was presented to us.

In AZA accredited facilities periodic reviews of diet and husbandry changes should be conducted by the veterinarian along with the consultation with a nutritionist. Dr. Ball changed several diets of animals within the collection with no consultation of a nutritionist. These included giraffe, lemurs, orangutan, and mandrills. We lost 5 giraffe due to what I believe was the diet change that Dr. Ball quickly implemented. Taking the giraffe off a necessary grain to a diet that consisted of browse and hay. Upon questioning the death of these 5 giraffe we were told it was giraffe wasting disease by Dr. Ball and Larry Killmar. The necropsy for these giraffe were performed in the manatee hospital located near the manatee pools at the time. This was not a refrigerated isolated area which is an AZA requirement. The manatee hospital at the time was attached to our dive locker room and in close proximity to a manatee medical tanks. A deceased giraffe and eland were left in this area overnight without refrigeration. Once removed from the manatee hospital both of these animals were left in stericycle containers outside in the heat for several days after the necropsies were conducted. The tubs leaked down the service road.

AZA requires that fecal examinations should be conducted annually on all groups of animals. This simple non invasive test is to ensure that the animals have no parasites present that left untreated could prove to be deadly. Upon Dr. Ball's hiring these fecal collections stopped. We had a giraffe at the time that was deemed near death by Dr. Ball due to parasites. I feel with routine checking of fecals this could have potentially been prevented.

The above examples are what were discussed in the meeting on September 26, 2012. Another manatee that was not discussed in the meeting was a manatee named "Amanda." She was a manatee located at Homosassa Spring. I learned of her passing when Dr. Ball sedated this manatee and she died. I am still unsure as to why this animal was sedated. It was not a necessary practice with manatees unless it is deemed an extreme circumstance. Due to the above examples and the minimal action on upper managements part I resigned from Tampa's Lowry Park Zoo April 2013 for moral and ethical reasons.

Thank you for your time to look into this matter. I deeply appreciate it.

Sincerely,
Tanya Ward

FAO Terri Calleson

Re: Veterinary Care of Manatees

I am writing in regards to several recent discussions regarding negligent veterinary care of several Florida manatees. The events and cases in question date back several years however the two primary subjects which are most controversial are the use of field amputations as a "treatment" option for manatees suffering crab trap entanglements and the choice to feed manatees under human care with hay. I shall discuss each issue separately and provide additional case examples supporting the malpractice of Dr. Ray Ball and his negligence of manatee welfare.

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The primary reason the first amputation occurred was due to the rogue and cavalier attitude of the attending veterinarian and despite several other people highlighting appropriate alternative treatment approaches the animal was released into the wild. The lack of tracking/tagging devices applied to the animal prevent confirmation that the animal even survived post procedure. In addition to limb amputation and immediate release being completely unjustified the exposed fresh tissue creates a fresh blood supply in the environment increasing the animals risk to secondary infection. The image below shows not only healthy tissue left exposed but also open bone further increasing the risk of infection.





These images are from a manatee which received appropriate care for a damaged pectoral including surgery and wound care. The manatee is pictured here at the time of release with no bone protruding from the wound. The body condition indicates the manatee is in excellent condition to be released. This shows the alternative to the above field amputation.





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The second controversial action is the feeding of hay to manatees. Whilst this has been justified to in the manatees best interests in attempting to reduce weight of the long term captive manatees it has also been used extensively in the young growing manatees, which is extremely inappropriate. This has resulted in several manatees failing to gain the required weight at the rate needed to facilitate release within a 2 year period. Consequently manatees have been released in poor body condition and required early human intervention. This completely negates the efforts of the rehabilitation centers in ensuring the young manatees have adequate reserves at the time of release. The decision to feed hay was primarily an economical one to try and save money compared to feeding the expensive romaine. Whilst economics do need to be factored in, feeding a diet which is completely inappropriate is not a viable solution. The majority of animals which can sustain a diet of hay are ruminants. The anatomy of the gastrointestinal tract of manatees is not designed to deal with such a dry high fibrous poorly nutritious diet. The gut transit time of a manatee is 7 days from consumption to defecation. In a cow which consumes hay readily or a horse (hindgut fermenter) the gut transit time is 24- 48 hours. The damage the hay can cause by remaining in the gastrointestinal tract for 7 days is currently unknown but recent necropsy reports are indicating significant gastrointestinal effects. The decision to feed these animals hay was not researched sufficiently to justify such a drastic dietary change and in such large proportions. For example start with just a 5% addition to the diet and assess the digestibility in fecal samples rather than jumping to 90% of diet immediately. The long term adverse effects of these decisions are likely still to be discovered.

Case Example: Marmalade – Young orphaned manatee calf which arrived at Lowry Park Zoo on July 15th 2015. She presented with colic due to lack of milk ingestion and consuming organic matter from the river bed. This is a frequent presentation seen in rehabilitation and one which is readily managed with supportive care and careful nutrition. Several months after her arrival she was still having some colic issues and Dr Ball decided she had a foreign body obstruction of her intestine due to fishing line. There was absolutely no clinical evidence to support this diagnosis. She had been defecating regularly since arriving and just took some time to adjust to her colostrum and milk diet. There was a large amount of gas visible radiographically but no obstruction. The continual presence of fecal matter again reduced the incidence of an obstruction. Below is an email from September when Dr Ball decided he was going to open her up and do gastrointestinal surgery. Abdominal surgery has never been successful in a manatee therefore this course of action was most likely to be fatal. On receiving this email myself and another veterinarian immediately responded requesting caution and additional diagnostics to be taken prior to this drastic decision such as contrast radiography. This escalated quickly to requesting the acting CEO at the time Dr Larry Kilmar to rule against the decision of surgery due to this being a highly inappropriate treatment option. Dr Ball refused to do additional diagnostics and once the request for surgery was denied refused to be involved in treatment options. This manatee made a full recovery from the colic due to the dedicated care of Virginia Edmonds and was released earlier this year. Whilst this case may seem inconsequential due to the positive outcome I can assure you if I

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Thoughts???

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Large adult female manatee which presented with significant buoyancy issues due to a boat strike. On physical exam it was apparent that she was in the 3rd trimester of pregnancy. Despite the significant physical injuries from the boat strike and the extensive buoyancy issues the manatee consistently ate throughout rehabilitation. The keepers ensured food was accessible by providing additional side feeders and surface food to ensure it was accessible. Consistently throughout her rehabilitation Dr Ball insisted upon euthanasia. Despite her demeanour improving and appetite increasing due to the extent of her buoyancy issues euthanasia was consistently raised. Instead we pursued an alternative treatment approach involving multiple small thoracocentesis procedures to prevent her being dry docked for a



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FAO Terri Calleson

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After attending the pre-release health assessment for Gleewood and 3 other rehabilitated manatees on the morning of 12/6/2017 at Homosassa Springs Wildlife Park, I spoke with USFWS personnel to voice concern about Gleewood's body condition and sent photos for review to other entities of the Manatee Rehabilitation Partnership as is routinely done. Photos depicted numerous open wounds, vertical scrapes covering both her lower sides, the centers of which were still pink in color.

USFWS let me know that Dr. Ball/Homosassa had reported on 10/7/2017 that Gleewood was found in with the hippo Lucifer, stranded on her back on the beach, that she did not have any marks from him and really only had some scrapes from being on her back. She had been given anti-inflammatories and returned to the paddocks, and was expected to make a full recovery.

I voiced concerns to USFWS about Gleewood's external appearance, weight, and straight length. She behaved somewhat lethargically while lying on the floor of the drained pool waiting for the assessment, with regular respirations but not moving around much. All 4 manatees were deemed releasable for the 2018 winter season by Dr. Ball/Homosassa, but with a straight length of 214 centimeters and a weight of 570 pounds she was not large enough for release as defined by the desired Manatee Rehabilitation Partnership guidelines of minimum 234 centimeters and at least 600 pounds. (It was later discovered that weights obtained on 12/06/17 were incorrect; Gleewood's weight as measured on 12/22/17 was 430 pounds.) Her physical appearance, to me, also brought up concerns about the possibility of internal damage.

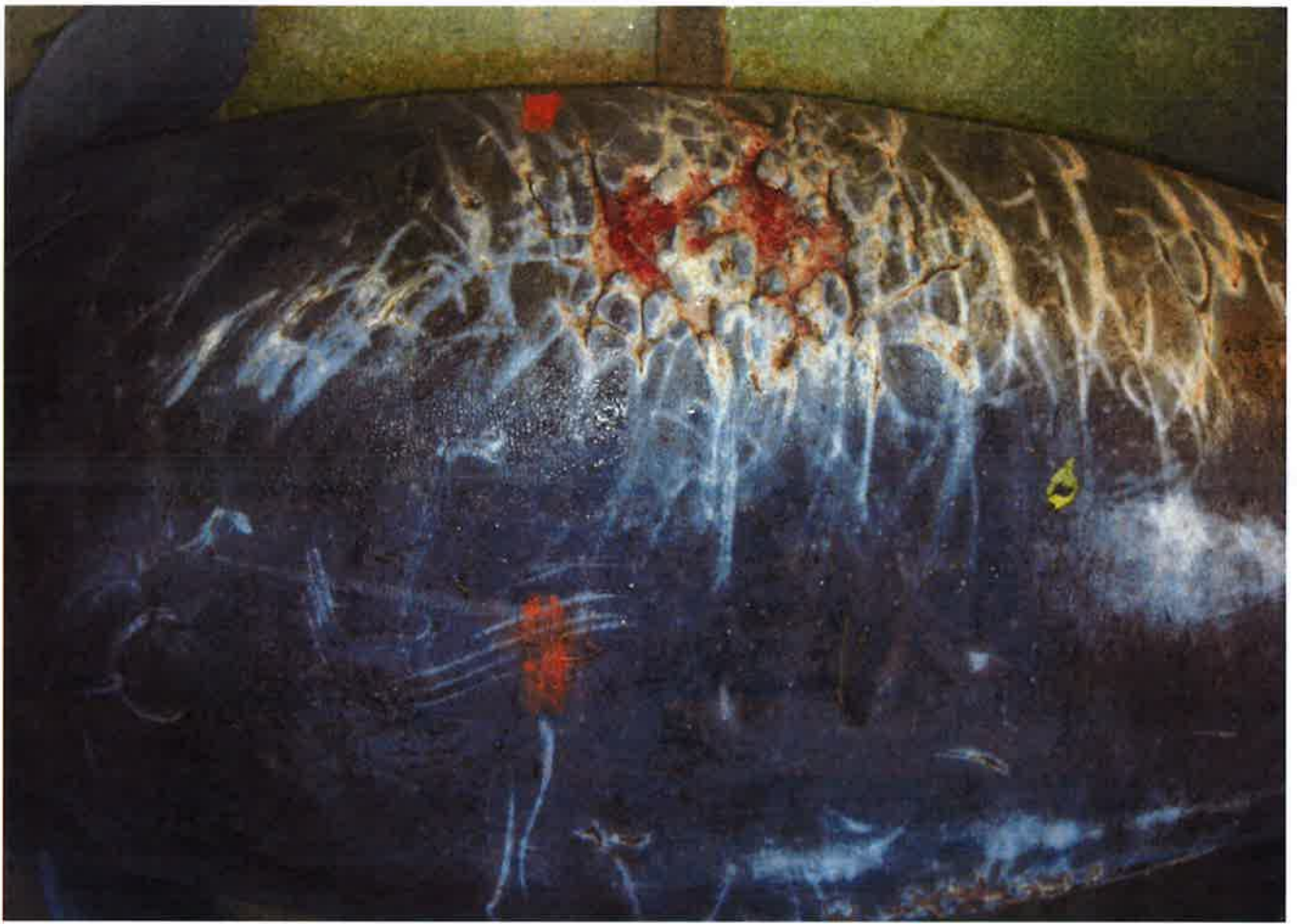
Gleewood's weight in September 2017, measured at Homosassa Springs Wildlife Park, had been recorded as 470 pounds. If this is correct, she had been losing weight. This, coupled with her open and still pink wounds, was concerning.

Following this report of concern, USFWS staff stated that they would check into this situation.

Melody J Fischer 5/24/18











Barry, Anna <anna_barry@fws.gov>

RE: Complaints Involving Manatees - concern over lack of redaction/attachments by complainant (info that went out to cooperating agencies was out of order)

1 message

Teresa Calleson <teresa_calleson@fws.gov>

Tue, Feb 19, 2019 at 9:49 AM

To: Anna Barry <anna_barry@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>

Cc: Pamela Scruggs <pamela_scruggs@fws.gov>, Jay Herrington <Jay_Herrington@fws.gov>, Jim Valade <jim_valade@fws.gov>, Laury Parramore <laury_parramore@fws.gov>

Hi all,

In reviewing the attachments that went to the Florida Fish and Wildlife Conservation Commission (FWC) in the last couple of weeks, it is apparent that there were problems with the organization of the documents (some of the complainant statements were mixed and out of order and pages were possibly missing). I was unaware that this had happened until being copied on the attachments that were sent to FWC and likely distributed to those with pending public records requests via Sunshine Law in Florida. Most of these issues expressing concern over the treatment of manatees by Dr. Ball were brought to my attention between December 2017 and February 2018. After notifying DMA staff of the complaints, I was told to wait to take the complainant statements until DMA staff had met with the Solicitor's office to discuss among other issues, the ability to redact the complainant names. Once I received the go ahead that the names could be redacted should there be public records requests, I went ahead with taking the statements and then transmitted those to DMA. I was instructed to transmit them as hard copies only via Fed Ex and each complainant statement was separated within the FedEx package and clearly identified. I'm not sure what happened to the information that was distributed publicly because that is not how I transmitted it to DMA.

To ease confusion and since the complaints are now out there in an electronic format, I'm attaching each complainant statement to this email with identifiers in the file name that tell which complainant submitted the information. Will DMA be resending the information in the correct order to any groups that requested it from DMA (i.e. USDA, FWC, etc – I'm not sure who all has requested)? I'm just very concerned that this happened, especially since they follow my transmittal letter from NFESO to DMA. I'm also including my notes on the Gleewood manatee neglect case and interaction with Dr. Ball, since those were sent previously to DMA.

Please let me know what you all decide. Thanks and please do not hesitate to let me know if you need any additional information or if you have questions about the information submitted as part of this case. Thanks!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Teresa Calleson [mailto:teresa_calleson@fws.gov]

Sent: Thursday, February 14, 2019 4:17 PM

To: Anna Barry; Mary Cogliano

Cc: Pamela Scruggs; Jay Herrington (Jay_Herrington@fws.gov); Jim Valade (jim_valade@fws.gov)

Subject: FW: Complaints Involving Manatees - concern over lack of redaction (as agreed to with Solicitor's office and some of the first pdf is out of order and missing pages)

Importance: High

Hi Anna and Mary,

As I'm looking back through files and emails for my review of the Zoo's response letter, I'm concerned that the complaints that were transmitted to FWC do not have the names redacted, as we had discussed (and I know DMA discussed with the Solicitor's office prior to me taking the statements from the individual complainants). When I had the complainants draft their statements, I indicated that DMA would redact the names for privacy, should this become a public records issue. It appears that this was not done and I'm concerned for these complainants, several who fear speaking out publicly after their experiences when trying to report allegations of concerns for manatee welfare directly to zoo management.

In addition, I noticed that the first pdf which groups complaints 1-5 has some pages out of order (complainant statements are mixed) and possibly missing some pages. In that pdf, the NFESO cover letter requesting redaction of the names is included. Did any other requesting groups get these same attachments? This is the only one I have been cc'd on, to date. Please let us know how best to handle these issues, as it sounds like there are FOIA requests, etc. already submitted. I have all of the complainant statements in individual pdfs if you need them. Sorry but I feel the need to bring this to your attention for any further distribution. Thanks!

Terri Calleson

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From: Barry, Anna [mailto:anna_barry@fws.gov]
Sent: Thursday, February 07, 2019 11:08 AM
To: Katherine.Frisch@myfwc.com
Cc: Terri Calleson; Mary Cogliano
Subject: Fwd: Complaints Involving Manatees

Dear Kat Frisch,

In response to your January 29, 2019, e-mail message, attached are the complaints received by our office.

Sincerely,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

Please be aware that we process application on a first come first serve basis and due to the number of applications we receive some delays are unavoidable.

We do not accept applications via fax or e-mail.

Sign up for our e-newsletter to learn how we're working around the globe to protect species and their habitats!



WARNING: The contents of this e-mail (including attachments) might be protected under the Privacy Act and intended only for the use of the individual(s) and/or entity(ies) named above. It may contain information that is privileged, confidential, or otherwise protected by applicable law. If the recipient or reader of this e-mail is not the intended recipient, you are hereby notified that any dissemination, disclosure, copying or distribution of the contents of this e-mail message is strictly prohibited. If you have received this e-mail in error, please immediately notify the sender and destroy all copies without reading or disclosing their contents. Thank you.


12 attachments


 **Complainant 1 submittal.pdf**
1042K

 **Dana info from Pfizer from Compl 1.pdf**
123K

 **Compl 2 Email bw M Walsh and R Ball re Amandas death and lack of intubation equipment 2011.pdf**
140K

 **Complainant 2 Statement regarding R Ball.pdf**
487K

 **Complainant 3 statement.pdf**
63K

 **20180503_itr_Compl_4_Calleson_RB_vet_practice_concerns.pdf**
467K

 **Compl 5 input on cases.pdf**
198K

 **Compl 5 submittal.pdf**
569K

 **Complainant 6 Statement re Gleewood May 2018.pdf**
486K

 **20181111_itr_Compl_7_Statement_Dr_Ball_case.docx**
13K

 **20181114_itr_Compl_7_Statement_followup_Dr_Ball_case.docx**
18K

 **Gleewood accounting T Calleson 6.6.2018.docx**
2708K

Terri Calleson – Gleewood notes for the file

Gleewood is a young female manatee that was rescued on 1/10/2017 as an orphaned calf that was exhibiting cold stress symptoms. She was rescued by the FWC's Southwest Field Lab and taken to Lowry Park Zoo for assessment and rehabilitation. At the time of rescue, Gleewood was 193 cm in length and 269 lbs. Due to the Lowry Park Zoo closure associated with construction, Gleewood was moved to Homosassa Springs Wildlife State Park on 10/4/2017.

On October 7, 2017, Jim Valade and I received an email notification from Dr. Ray Ball that there had been an incident at Homosassa Springs Wildlife State Park involving Gleewood. Dr. Ball stated that "...Gleewood had been found in with the hippo Lucifer, stranded on her back on the beach...she did not have any marks from him and really only had some scrapes from being on her back." Dr. Ball gave her anti-inflammatories and returned her to the manatee paddock.

Based on the entry, Dr. Ball felt that she would be sore but should recover well. After reviewing this information and in retrospect due to timing of receipt of materials, I felt that there were differences in the descriptions provided immediately after the incident and then what I later found entered in the clinical notes. The clinical notes acknowledge that there may have been interaction with the hippo which was not relayed to us in the initial notification. Based on this, we should have asked for more information but we were unaware that there may have been interaction with the hippo. The additional clinical notes from Dr. Ball (entered on 10/10/2017; sent to the USFWS on 1/12/2018) indicate that the manatee is doing well and the "superficial abrasions are barely visible now." Looking back, this entry seems inconsistent with the animal condition reported to us on 12/6/2017.

After identifying the gaps between habitats, Homosassa staff made adjustments and then discussed fencing as a permanent solution. On the following day, Tricia Fowler from Homosassa provided an update on Gleewood that she was "active and eating" and "the scrapes that she received yesterday are looking good and no longer red." An update was also provided on the area of the breach indicating that reinforcement had been performed on the weir grates and that a full dive team inspection was planned for the following day. Based on the above information, Service personnel responded to the park staff but at the time, we did not request a followup report or pictures of the animal.

The manatees that had been temporarily moved to Homosassa Springs Wildlife State Park (Camlee, Marmalade, Gleewood, Neuson and Cayo) were given health assessments on December 6, 2017, in preparation for their upcoming release back to the wild. Following the health assessment, I was contacted by someone present at the health assessment who was concerned for Gleewood based on her appearance, small size, and overall lethargy. I asked for any information and pictures that I could review. On that day, Gleewood was noted as being

214 cm in length and 570 lbs (length was likely accurate but weight was not collected accurately as she was 430 lbs at weigh-in at Sea World a few weeks later). According to Homosassa/Lowry Park Zoo staff, the scales were not tared correctly and all the rehab animals weights were incorrect. This is very important as Dr. Ball deemed all of the manatees except Cayo as cleared for release. Had the inaccuracy of the weights not been discovered, several rehab animals could have been sent back to the wild well below the recommended 600 lb threshold. Camlee was initially the only one released and she did not do well at all and was captured by FWC staff and taken to Sea World due to severe emaciation, etc. Marmalade was released later in the winter and is currently still out in the wild in the Citrus County area. She is currently the only one of the five young rehab animals released that is still back in the wild. Once I received the photos of Gleewood (see below), I immediately tried to contact Jim Valade (traveling for work in West Virginia) to see what options were available to get this animal the care that she needed.

For comparison, Dr. Ball's clinical notes from December 6, 2017 (received January 12, 2018) state that "...previous scrapes have developed into open wounds" and also goes on to say that "...appears well and fit for release." It is surprising to me that a manatee with severe open wounds and that is both underweight and under the recommended length could still be considered a candidate for release. Should Gleewood have been released in this condition, it is unlikely that she would have fared well. Such an outcome would not have been good for this young manatee, the Manatee Rescue and Rehabilitation Partnership, the Lowry Park Zoo and Homosassa Springs Wildlife State Park.

On 12/8/2017, photos of Gleewood at her health assessment (see below) were sent to USFWS personnel, as is frequently done. When USFWS reviewed the photos and other information from the health assessment, we were concerned about Gleewood's overall body condition, external appearance, weight and length, behavioral observations, and the uncertainty of whether there were additional internal injuries. At that point, USFWS staff checked into this situation further.





Dr. Ball sent us an email on 12/8/2017 summarizing the health assessments for the Lowry Park Zoo rehab animals. Dr. Ball's email does not indicate any concerns with Gleewood and does not mention the injuries to both lateral aspects. The email mentions that he does not expect "Marmalade" to have any problems making the 600 lb criteria for release (Marmalade's weight is listed as 684 and Gleewood is the only one listed under 600 lbs so I'm guessing he actually meant Gleewood. This was confirmed to Randy Junge of the Columbus Zoo later.) All of the rehab animals (except Cayo) from Lowry were deemed releasable and medically cleared. In my opinion, there is no way that Gleewood should have been cleared for release in this condition. Based on additional discussions, this manatee did not receive the wound care, monitoring or necessary attention to help heal from these injuries. This was generally a case of neglect that coupled with the fact that she was in a natural spring, rather than the above ground heated pool, did not allow her to heal or put on any weight.

Following internal discussions, USFWS staff opted to request two opinions from veterinarians within the Manatee Rescue and Rehabilitation Partnership (MRP) on December 11, 2017. Photos from Gleewood's health assessment and basic information, such as the email notification of the incident, were sent to both veterinarians for review.

Veterinarian opinion 1:

The manatee has numerous, healing, irregular-shaped, randomly placed lesions on all aspects pictured (dorsal head, dorsum, lateral aspects, flippers, fluke). Most lesions consist of thin linear lines, many of which are in a raking pattern. Some linear lesions appear to have ulcerating, necrotic tissue in the wound centers. The lesions are most extensive on the mid right dorsolateral aspect and caudal left lateral aspect. In these regions, the lesions form one large open wound with raw granulation tissue in the center. These wounds penetrate into the dermis. The wounds all appear to be from the same age and one incident. 'Translation': numerous significant chronic healing wounds with inflammation and various depths into the skin.

It is possible these wounds were superficial scrapes at first, but exposure to suboptimal water temperatures can sometimes slow the wound healing and/or expose the damaged tissue underneath that was not visible at first. These complications in wound healing were recently presented by Margie Barlas at the Marine Mammal Conference in Halifax, from observations at Brevard captures and tagging.

Based on lesion appearance and placement, the origin of the lesions appears to be trauma. Lesions from a natural coagulation disorder such as seen in cold stress disease would be placed more on and around the extremities. Based on the manatee's history and comparison of the lesions with battle wounds in wild hippos, it is most probable that the wounds were caused by interaction with the Homosassa hippo. See attached photo, I confirmed with a veterinary colleague who has field experience with hippos in Africa that wounds as seen in this picture below are caused by conspecifics. Alternative cause could be trauma against an object. To cause a placement of wounds on all aspects, the manatee would have rolled and thrashed 'voluntarily' on itself, or be thrown around by something else. If the manatee caused the trauma herself, it could have been from being entrapped in a fence or other part of the enclosure. However, the placement of the most severe wound makes this scenario less likely. Usually, entrapment wounds are on the widest part of the manatee, and are either dorso-ventral or bilaterally symmetric. Looking from the front or back at the body, these wounds appear to be more at a 2 o'clock and 10 o'clock of the manatee and not at 3 o'clock and 9 o'clock. Also, the wound on the left seems further back in the more tapered part of the body. Therefore, from these pictures, I suspect it is more probable to be from a bite wound.

The following photo was also included for comparison:



Veterinarian opinion 2:

The pictures provided show extensive vertical cutting wounds in various stages of healing with central lateral open wounds exhibiting open granulation tissue in areas that appear to concentrate the frequency of the vertical cuts coalescing in the middle regions on both sides of the body. There are some interesting half circle patterns in the abrasions along the back that suggest grabbing and movement of the animal in relation to the sharp material involved. There are no full body photos to compare left and right and the tail photos are not detailed, nor is the animal's ventral surface available. Since the time table given is that these are related to the animal gaining access to the hippo exhibit two months ago there is cause for concern of the current condition of the animal. In analyzing the photos I would agree (with the other vet opinion) that these are probably related to trauma and logically from the tooth wounds from the hippo as the primary etiology. Fence related lesions would more likely be horizontal or longitudinal along the body unless caught by sharp protrusions and spinning in place for an extended period before freeing itself. To this end you should expect a hole in the fence or an area of the fence that would fit this appearance of the wounds. In these photos the lesions are more vertical that would correspond to multiple bite wounds from the hippo. The additional information that the animal was found on land on its back would suggest placement there by the hippo unless there is a tidal change that would lower the water with the manatee trying to stay away from the hippo similar to females attempting to flee from males and getting grounded by the tide. The character of the wounds two months after the insult does suggest impeded healing with large areas of granulation tissue still open or alternatively that these wounds were even more serious after the trauma. The temperature of the springs would be a

factor in slow healing and the size of the wounds would suggest a relative metabolic deficit is ongoing. Since this size animal has been shown with investigations in a metabolic chamber, by Graham Worthy, to be less capable of responding metabolically to cold temperatures the healing rate may be longer than an adult. Open wounds can affect an animal's immune response and if Homosassa is not able to provide a warmer temperature and the potential need for wound therapy would then suggest the animal be moved to a warmer environment to promote more active healing, where the animal is not spending caloric needs on keeping warm, and where the wound can be regularly treated and evaluated if needed.

Following receipt of the two veterinarian opinions and after discussions with USFWS supervisory staff and Doug Warmolts from the Columbus Zoo (MRP chair) on 12/12/2017, the USFWS determines that Gleewood needed to be moved to another facility that can better care for her needs. USFWS sends notification to Andy Garrett, FWC's rescue coordinator with cc's to other FWC and USFWS staff, Dr. Ball, Homosassa staff and Doug Warmolts. This email stated that Gleewood's wounds from the event were "not resolving and possibly in worse condition than reported to us, two months prior." In this correspondence, the USFWS requested that Gleewood be moved to "a receiving facility that can provide her with a warmer water environment, high caloric diet to facilitate healing, and daily/frequent veterinary care and associated wound treatment." At this point, Sea World had already agreed to accept Gleewood for treatment and further rehabilitation. The Service requested that this transfer take place within one week. However, it was actually more like ten days because there was no crane on site as promised by Lowry Park Zoo/ZooTampa staff this winter so Homosassa staff had to rent a crane to remove the manatee from the medical pool. SWF was asked to provide transport as well due to concerns over the animal's condition and because Dr. Ball had recently been sedating manatees for transports and stating that staff could not ride in the back with them. **It is important to note that this was the first removal of a manatee by the USFWS in Florida due to inadequate care at a rehabilitation facility.**

On 12/13/2017, I went to the Jacksonville Zoo to attend a health assessment for "Carolina", a manatee rescued in South Carolina. Dr. Ball attended the health assessment because he is also on contract with the Jacksonville Zoo. He asked to speak with me before I left the facility, which I agreed to. Following the health assessments, Dr. Ball and I spoke regarding Gleewood. He was adamant that he would like the Service to reconsider the decision to move Gleewood to Sea World. He felt that this would be upsetting to Homosassa staff and that they should be given the opportunity to see the Gleewood incident through. I told him it was a done deal because she needed wound treatment, better and more frequent veterinary care, warm water (in above ground heated pool, not the spring), and a higher caloric diet (romaine) and that

could not be provided at Homosassa. He asked if it would change things if he agreed to go up to Homosassa more frequently. I asked if he would plan to do wound therapy and he said that he wouldn't but that he could have more of a presence. I was surprised that he would not want to provide wound therapy and told him that our decision would not change and that she would be moved on 12/22/17 as scheduled so that she could get the care she needs to recover. Upon arrival at Sea World on 12/22/17, my understanding is that she received a regular checkup, weigh-in and immediate wound treatment (debriding, honey application, etc.) before being placed in the medical pool and offered food.

On 12/21/17, USFWS has a conversation with Kim Tennille, Homosassa park manager and Tricia Fowler regarding the Gleewood incident and a few other issues at Homosassa. During that conversation, Homosassa staff indicated that USDA had not been notified but that there had been an internal incident report. We asked that USDA be notified and we receive a copy of the incident report.

The following day (12/22/17), Sea World staff drove from Orlando to Homosassa to pick up Gleewood and transport her back to SWF. I asked that she be transported by SWF staff as Dr. Ball has recently been sedating animals during transport and saying that no staff can accompany the manatees. Due to uncertainty over her condition, I asked Sea World (JP Peterson) to pick her up and transport her, per their protocols. Dr. Lara Croft was the lead vet and accompanied Gleewood on the transport. Check-in weight at SWF was 430 lbs and was alarming given the prior weight of 570 lbs recorded on 12/6/17, clearly in error. SWF will schedule radiographs (performed 12/29/17; unremarkable) – did indicate that there is “some heat sensitivity where the lesions are the worst but that may be attributable to the surface wounds as she appears symmetrical and is moving well.” Medical records were transferred to SWF staff.



12/22/17 Gleewood on arrival at SWF (pics courtesy of SWF)

12/28/2017: USFWS (Terri Calleson) visited SWF staff (JP Peterson) and Gleewood. She seemed to be doing well in medical pool but still has extensive open wounds, but appearance is better already in one week. She was observed socializing with other manatees and exhibiting normal manatee behavior.



Gleewood at Sea World – 12/28/17

1/5/2018: Report from SWF vet along with submission of medical records. Gleewood's wounds are healing well and there is a health assessment scheduled for 1/6/2018. Followup bloodwork looks good.

1/12/2018: At USFWS staff's request, Homosassa provides Gleewood's medical records. In this email exchange, we requested the report to USDA and any photos of her taken when she was discovered in the hippo exhibit on 10/7/2017 or immediately following the incident. None were taken by Homosassa staff and Dr. Ball was unable to locate the images taken on his phone. Homosassa's incident report states that the maintenance team "...determined that the manatee's injuries were caused by the manatee encountering (attempting to push through and digging under) the metal grates of the Weir System..."

1/16/2018: Kim Tennille from HSWSP sends Gleewood's incident report to USFWS for review.

1/17/2018: USFWS site visit to SWF. Gleewood is doing well and external appearance is improving. She has now been moved into the main exhibit with other females and young animals.

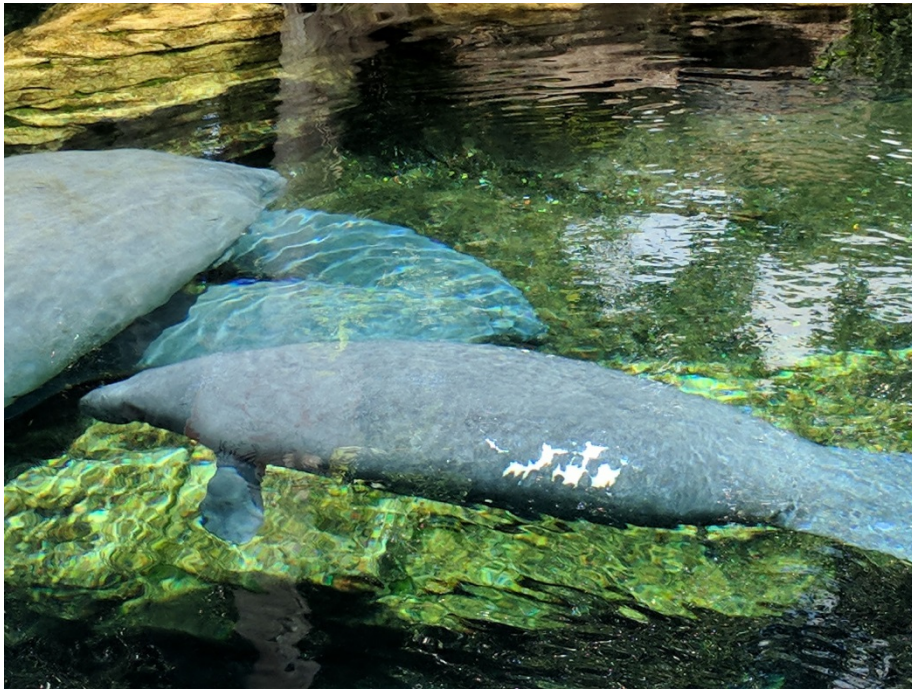


Gleewood at Sea World on 1/17/2018 (she is facing the camera in the right picture)

1/18/2018: USDA was called by the Service to review the incident. The Service was advised that the incident report would be filed and that no further action would be taken by USDA.

4/3/2018 Gleewood's checkup at Sea World. She weighs 615 lbs and wounds are healing nicely.





Gleewood at Sea World 5/15/2018 (Sea to Shore photo)

On 5/22/2018, Dr. Ball provided pictures that he had just located from the day that Gleewood was pulled from the hippo's enclosure (see below).



Gleewood pictures taken on 10/7/2018 but provided to USFWS on 5/22/2018



Barry, Anna <anna_barry@fws.gov>

ZooTampa

1 message

Barry, Anna <anna_barry@fws.gov>
To: Larry Killmar <Larry.Killmar@zootampa.org>

Tue, Feb 19, 2019 at 1:42 PM

Received, thanks.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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On Mon, Feb 18, 2019 at 6:26 AM Larry Killmar <Larry.Killmar@zootampa.org> wrote:

Anna Barry and Mary Cogliano,

To confirm, we have the following veterinarians as backups for Dr. Lauren Smith if the need arises:

- 1) Dr. Mike Walsh
- 2) Jacksonville Zoo veterinarians, Dr. Meredith Persky and Dr. Yousuf Jafarey
- 3) Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, has agreed to provide his veterinary staff at SeaWorld as well once he receives endorsement to that effect from the service. You should have an e-mail dated February 15, 2019 from Terri Calleson to that effect.

As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Larry

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

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Consider the environment;

Think before you print!





Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa LOA #90101C

1 message

Barry, Anna <anna_barry@fws.gov>
To: chris.dold@seaworld.com

Fri, Feb 22, 2019 at 3:32 PM

Dear Dr. Chris Dold,

I was informed by Larry Killmar of ZooTampa that SeaWorld Parks is willing to allow their staff to assist ZooTampa when back-up veterinary services are needed with manatees. Please confirm if this is the case?

Sincerely,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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Barry, Anna <anna_barry@fws.gov>

[EXTERNAL] Zoo Tampa - Back up veterinarian plan

3 messages

Pardo, Michelle <MCPardo@duanemorris.com>

Mon, Feb 25, 2019 at 6:58 PM

To: "Cogliano, Mary" <mary_cogliano@fws.gov>

Cc: "Pamela_scruggs@fws.gov" <Pamela_scruggs@fws.gov>, "anna_barry@fws.gov" <anna_barry@fws.gov>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Mary-

Thank you for taking the time to check in with me today about ZooTampa. You asked me to confirm the Zoo's back-up veterinarian plan for the manatee program, as it was brought to FWS's attention that Mike Walsh may no longer be able to serve in a back-up capacity. We have checked with Dr. Walsh and confirmed that he is still ready and willing to serve at ZooTampa's back-up veterinarian. This is in addition to back-up veterinarian services by Dr. Christopher Dold from SeaWorld and Drs. Meredith Persky and Yousuf Jafarey from Jacksonville Zoo, which the Zoo previously communicated to Ms. Barry via email on February 14, 2019. As you can imagine, ZooTampa is very concerned about what appears to be a constant source of misinformation that continues to obstruct its ability to return to the important mission of caring for manatees. We are hopeful that this clears up any confusion that may have developed over back-up veterinary plans. We are hopeful that FWS now has all the information necessary to move forward.

Thank you,

Michelle



www.duanemorris.com

Michelle C. Pardo
Partner

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Cogliano, Mary <mary_cogliano@fws.gov>

Tue, Feb 26, 2019 at 9:43 AM

To: "Pardo, Michelle" <MCPardo@duanemorris.com>

Cc: "Pamela_scruggs@fws.gov" <Pamela_scruggs@fws.gov>, "anna_barry@fws.gov" <anna_barry@fws.gov>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Hi Michelle,

I appreciate you getting back to me so quickly on this. Please be assured that we are committed to ensuring the Service is appropriately implementing its authority under the ESA and MMPA.

Best regards,

Mary

[Quoted text hidden]

--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

Pardo, Michelle <MCPardo@duanemorris.com>

Tue, Feb 26, 2019 at 10:44 AM

To: "Cogliano, Mary" <mary_cogliano@fws.gov>

Cc: "Pamela_scruggs@fws.gov" <Pamela_scruggs@fws.gov>, "anna_barry@fws.gov" <anna_barry@fws.gov>, Joe Couceiro <Joe.Couceiro@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>

Thanks, Mary.

[Quoted text hidden]

0.1 Manatee 103020

"Dana"

- 8 May, 2012- female manatee weighing 2380lbs was rescued and brought to the manatee hospital. She showed signs of a recent boat strike and symptoms of a punctured lung. Dr. Ball Was not present. Vet tech Heather Henry gave injection
- 14 May- gave birth to a still born calf
- 15 May- injection and fluids. No food consumption for 7 days
- 17 May- First chest tap attempted. No radiographs were taken, so multiple taps were needed To determine the correct placement to remove the most air. No measures were taken To prevent outside bacteria from entering the chest cavity through these injection Sites.
- 19-22 May- another chest tap is performed on the 19th and by the 22nd the air has been removed And Dana is able to submerge. She is also starting to consume small amounts of food.
- 23- May- First abscess begins to appear on her back. Food consumption increases.
- 2- June- After eating well for ten days, her food consumption starts to decline. The abscess is getting Larger. She has received no antibiotics in 10 days.
- 7- June- Eating continues to decline. First abscess is tapped. Two more have started to form. Antibiotics given.
- 8- June- First abscess tapped again as well as two new ones.
- 11-June- Continue to clean out abscesses daily. Dr. Ball consulting Vet intern, Dr. Nicco on the Abscesses states that he, Dr. Ball, introduced the bacteria that caused them through the Chest taps.
- 12-25 June- Daily wound care on lanced abscesses continues. Manatee is now tubed fluids daily due No food consumption.
- 26- June- A fourth abscess has formed and is now being treated
- 29-2 July- unable to treat. Having given her access to the display pools in the hope of stimulating her Appetite, Dana did not come back to the treatment area during this time.
- 3-July- Able to secure Dana in the medical pools again. Dr. Ball was hesitant to give her anymore Injections, including antibiotic. We asked about oral meds and he agreed. However the drug He brought was the injectable (Exenel). When questioned about giving this as an oral , instead of the other antibiotics usually given orally. He stated "I'm breaking new ground". Again we questioned the use of a drug in an unproven manner. He dismissed our concerns And administered the drug anyway.

Out of concern for the manatee that was given this treatment we conducted our own research. Pfizer, who makes the product, does not recommend giving it orally under any circumstances and in some cases it is actually illegal to do so. Though the Veterinary Extra Label Use Act does give some leeway for using this drug other than prescribed, some of the requirements to do so were not met.

- 7- July- Dana begins to have trouble breathing and is unable to sustain herself in a full pool of water. She is separated into a separate med pool set at a shallow depth. She continues to receive Fluids due to lack of food consumption. Dr. Ball has also continued to give her oral Antibiotics that are designed to be given as an injectable.
- 8- July- Based on an observation that this new set of symptoms, (high respirations, unable to use the Water column) were similar to another manatee, Dr. Ball began to treat Dana for a heart Condition
- 10-July- after 27 days of not eating and only getting fluids. Dr. Ball agreed to using a grain mixture to

Tube feed her some nutrition.

14- July- Dana dies

It was determined in her necropsy that there was infection in her lung. The amount of infected material removed from her lung is not enough to have been there prior to her being in the hospital. This leads one to believe that if proper Veterinary procedure had been followed than possibly Dana might have been saved.

Subject: Excenel RTU Inquiry
From: VMIPS (VMIPS@pfizer.com)
To: [REDACTED]
Date: Tuesday, August 14, 2012 10:05 AM



August 14, 2012

Dear Ms. Galbraith,

Thank you for your inquiry regarding Excenel RTU. According to the **Cephalosporin Order of Prohibition on Extra Label Use of Cephalosporins** enacted by the FDA in April 2012, the oral administration of Excenel RTU would be illegal.

Veterinary Medical Information and Product Support

Pfizer Animal Health

800-366-5288



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa LOA #90101C

1 message

Barry, Anna <anna_barry@fws.gov>

Fri, Mar 8, 2019 at 4:11 PM

To: Joe Couceiro <Joe.Couceiro@zootampa.org>, Leeann Rottman <leeann.rottman@zootampa.org>, Larry Killmar <Larry.Killmar@zootampa.org>, Terri Calleson <Teresa_Calleson@fws.gov>, Jay Herrington <jay_herrington@fws.gov>, "Scruggs, Pamela" <pamela_scruggs@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>, Doug.Warmolts@columbuszoo.org, jgaspard@pittsburghzoo.org

Dear Mr. Couceiro,

Based on the information and confirmation we received from your office regarding your alternate veterinarians for your facility, and in consultation with our North Florida Ecological Services Office (NFESO) and the Manatee Rescue & Rehabilitation Partnership (MRP), the following manatees have been identified as animals available to be transferred to your facility. Again, we would like to reiterate that Dr. Ray Ball cannot have any activities or provide any consultation with manatees until a determination has been made on your application.

During the remainder of this review process, Dr. Lauren Smith and your manatee staff should consult with your alternate veterinarians and/or the Veterinary Committee of the MRP on any issues/procedures involving fluid therapy and feeding, post-rescue, sedation during transport, and euthanasia or any other issues or concerns you may have. Also, in accordance with your LOA, Section III, Provision 3 it states the following:

3. You must consult with and obtain NFESO approval prior to administering euthanasia.

Manatees Currently Recommended

Tm-1834: This is a conditionally non-releasable animal.

Tm-1857: This was a challenging refractory pneumothorax case that had a chest tube placed. There was some concern about a possible pleuritis and this animal is still under medical care with Dr. Erlacher-Reid.

Tm-1858: This was the calf that came in with Tm-1857. They have not been housed together in some time since arrival, but Tm-1858 is doing very well clinically and is not under medical care.

Tm-1861: This was a pneumothorax case that has resolved and is doing very well. Has not been handled since 12/14/18 and has not re-inflated. My understanding is that this manatee is medically cleared for release.

We were informed that Tm-1857 and Tm-1861 would likely be considered candidates for release in the near future. All four of these manatees were rescued from the west coast of Florida.

At this time we recommend that you contact Jon Peterson and Andy Garrett with the MRP to begin the coordination of the transfer of the manatees from SeaWorld to your facility. We request at this time that you contact NFESO and DMA once the transportation plan has been confirmed and after the manatees are received at your facility.

Please let us know if you have any questions.

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1-800-358-2104, ext. 1976 or 703-358-1976
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RE: ZooTampa - concerns related to 3/7/19 correspondence from DMA

3 messages

Teresa Calleson <teresa_calleson@fws.gov>

Thu, Mar 7, 2019 at 11:34 PM

To: Anna Barry <anna_barry@fws.gov>

Cc: Mary Cogliano <mary_cogliano@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Jay Herrington <jay_herrington@fws.gov>

Anna,

Thank you for the cc on the letter. I had a meeting at Florida Power and Light's Canaveral power plant today and then helped with five manatee releases (from three facilities - Sea World, Jacksonville Zoo and South Florida Museum) so just saw the letter this evening. In looking at the letter you sent out from DMA, I have several very significant concerns that I would like to relay to DMA staff:

- In the first paragraph, you mention that "...ZooTampa has informed us that Dr. Mike Walsh (Sea World) and Dr. Meredith Persky and Dr. Yousuf Jafarey (Jacksonville Zoo) will serve as alternate veterinarians when the facility veterinarian is not available." Can you please provide the formal documentation of the alternate vet arrangement that we typically require as part of the LOA process (for example, Dr. Walsh's arrangement with Clearwater Marine Aquarium)? I have not seen this documentation yet.
- Also, Dr. Walsh is not associated with Sea World. He works for the University of Florida (was at Sea World many years ago) and when I had talked with him last week, he indicated that he had not entered into a contract with ZooTampa. Did something change? I have sent him a message but did not hear back this evening.
- As far as Jacksonville Zoo, at about 4:30 PM today (Thursday), I spoke with Craig Miller at Jacksonville Zoo via phone and coincidentally (because I did not know that DMA was sending a letter today and did not review it) asked if the Jacksonville Zoo vets had entered into a contract or formal arrangement with ZooTampa. Craig checked with Meredith and she said no, that they had not heard anything. I think there was a previous contact made with Jax Zoo but as I understand from a conversation with Craig later tonight, senior staff suggested that ZooTampa coordinate with a geographically closer facility, such as Sea World.
- In the last sentence of the letter, you state that the "...Service's North Florida Ecological Services Office (NFESO), in coordination with the Division of Management Authority, will continue to determine placement of manatees at ZooTampa and other authorized facilities." While NFESO provides some oversight and serves as the Service's liaison to the MRP group, NFESO does not determine placement or make transfers. In 2012, when our office reduced its role with the MRP, that function was generally taken over by the Rescue/Rehab Committee Co-chairs, the facilities involved, and to a certain extent, MRP leadership. In the last couple of years, NFESO only determined placement in the case of "Gleewood" when she was injured in the hippo exhibit at Homosassa and then neglected for 2 months under Dr. Ball's care. In that instance, NFESO coordinated with other vets in the MRP, NFESO supervisory staff, and MRP leadership before instructing the Rescue/Rehab Committee co-chairs to have the manatee relocated to Sea World for appropriate treatment ASAP. The Rescue/Rehab Committee Co-chairs typically let me know when transfers

are planned via phone calls or emails, and I usually defer to them, but let them know that I'm in agreement with their decisions.

- Since DMA is ordering the placement of manatees at ZooTampa, will ZooTampa be in charge of transport? We have plenty of facility capacity at this point so the manatees do not have to move for capacity reasons. For example, this week at least 7 manatees were released back to the wild (4 from Sea World, 2 from Jacksonville Zoo and 1 from South Florida Museum). With these releases and the release of the manatee rescued from Charleston, SC last week, Jacksonville Zoo has no manatees and South Florida Museum only has one. That being said, will ZooTampa be responsible for the costs of the transports (may involve truck rentals, staff, etc.)? This question has already been posed to me and I'm uncertain how to respond, for planning purposes. This decision will need to be made in advance of the transfer request.

Please let us know your thoughts on these topics. I want to make sure that we are moving forward in the best manner for all parties including the MRP partners and with the alternative veterinarian arrangement firmly in place, to avoid any negative experiences for the rehabilitating manatees. Just so you are aware, my understanding is that it will take some time once manatees are transferred to test the bioload on the new system at the Zoo as well. I believe that Jay and I will both be in the office in the morning, if you would like to speak further about these concerns. As I work very closely on an almost daily basis with the MRP partners, I just want to make sure that we are all on the same page. Thanks!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Barry, Anna [mailto:anna_barry@fws.gov]

Sent: Thursday, March 07, 2019 5:56 PM

To: jgaspard@pittsburghzoo.org; Doug.Warmolts@columbuszoo.org

Cc: Mary Cogliano; Scruggs, Pamela; Terri Calleson; Jay Herrington

Subject: ZooTampa

Dear Mr. Gaspard and Mr. Warmolts,

Please see the attached letter concerning authorization for ZooTampa to receive and maintain manatees under the Manatee Rescue and Rehabilitation Program. We understand that you have been working with our North Florida Ecological Services Office to recommend specific manatees to be transferred to ZooTampa. We request that by noon

tomorrow you provide us with the identification of those manatees you recommend to be transferred to ZooTampa. We will respond with our final decision on those transfers by COB tomorrow.

Sincerely

Anna Barry

Supervisory Policy Specialist

USFWS/Division of Management Authority

Branch of Permits, MS: IA

5275 Leesburg Pike

Falls Church, VA 22041-3803

1-800-358-2104, ext. 1976 or 703-358-1976

Fax: 703-358-2281

E-mail: Anna_Barry@fws.gov

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Herrington, Jay <jay_herrington@fws.gov>

Fri, Mar 8, 2019 at 2:51 PM

To: Teresa Calleson <teresa_calleson@fws.gov>

Cc: Anna Barry <anna_barry@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>

Terri/Anna/Mary,

Just for clarification. The Service retain the ultimate authority on animal placement. Bullet number 4 of Terri's email might lead one to believe that we have no involvement. *"While NFESO provides some oversight and serves as the Service's liaison to the MRP group, the NFESO does not determine placement or transfers"*. While the MRP rescue/rehab committee co-chairs make recommendations on where animals are placed, the NFESO does provides concurrence or non-concurrence, through an e-mail or phone call.

Jay H.

[Quoted text hidden]

--

Jay B. Herrington
Field Supervisor
U. S. Fish and Wildlife Service
Northeast Florida Ecological Services Field Office
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[Jacksonville, FL 32256](#)
(904) 731-3191 (phone)
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E-mail: jay_herrington@fws.gov

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

Cogliano, Mary <mary_cogliano@fws.gov> Fri, Mar 8, 2019 at 3:03 PM
To: "Herrington, Jay" <jay_herrington@fws.gov>
Cc: Teresa Calleson <teresa_calleson@fws.gov>, Anna Barry <anna_barry@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>

Jay,

I appreciate the clarification, as you are correct -- although the MRP makes **recommendations** on placement, the Service **does** have the authority and the responsibility to **decide on** the placement of the manatees.

Also, I should clarify that in several places below, concern is expressed about a lack of contractual documentation between ZooTampa and their "back-up" veterinarians that they had identified. Please be aware that we do not nor have we in the past required that facilities provide us such contractual documentation. This information is not requested in the permit application nor the LOA itself. We do request that the facility name back-up veterinarians, which ZooTampa has done.

The association of Dr. Walsh with Sea World was in error, and we will send a correction.

As always, the cost of the transport of the animals should be negotiated between the two facilities involved. If they have problems reaching an agreement, please let us know.

Best regards,

Mary

[Quoted text hidden]

--
[Mary Cogliano, Ph.D.](#)
[Chief, Branch of Permits](#)
[Division of Management Authority](#)
[U.S. Fish and Wildlife Service](#)
[5275 Leesburg Pike, MS: IA](#)
[Falls Church, VA 22041-3803](#)
[Phone: \(703\) 358-1991](#)

Re: Lowry Park Zoological Society of Tampa LOA #90101C - critical care issue

Calleson, Teresa <teresa_calleson@fws.gov>

Sun 3/10/2019 7:32 PM

To: Barry, Anna <anna_barry@fws.gov>; Scruggs, Pamela <pamela_scruggs@fws.gov>; Cogliano, Mary <mary_cogliano@fws.gov>**Cc:** Herrington, Jay <jay_herrington@fws.gov>

Anna, Mary and Pam,

ZooTampa has asked the question if they are at this point, a fully functioning participant in manatee rescue and rehabilitation. The answer to that question, at this point in time, should probably be a "no" or at least somehow, conditional. The reason for this is that the ZooTampa manatee critical care facility has been down for upgrades since October 2017, and their new filtration system has not been tested with manatees to ensure full functionality. The need to certify the filtration system before the zoo will be fully open to taking critical manatees from the field was a directive that was given to the zoo by high level staff at the Florida Fish and Wildlife Conservation Commission (Florida Wildlife Research Institute - FWRI), whose agency was in charge of the state contract that funded the renovations. My understanding is that Gil McRae of FWRI has been the point person for dealing with the zoo on this issue, and has had recent conversations with them about not taking critical care cases until we are sure that everything works well. Until such time as the filtration system is checked, it would not be in the best interests of a critical care manatee patient to send it to a facility whose systems haven't been fully tested. This could result in additional stress to the manatee, less than optimal care, and the possibility that the manatee might have to be moved again to another facility, if conditions aren't appropriate. My understanding is that, once FWC and the Zoo are in agreement, that the new pools are fully functional (with the stable manatees), then it would be appropriate for acute cases to be sent to the ZooTampa facility. Just wanted you to be aware of these important discussions that had recently taken place between FWC/FWRI and the Zoo but FWC staff may be able to fill you in more on this issue and provide clarification, if needed. Thanks!

Terri Calleson
Fish and Wildlife Biologist
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Email: Teresa_Calleson@fws.gov
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From: Joe Couceiro [mailto:Joe.Couceiro@ZooTampa.org]**Sent:** Saturday, March 09, 2019 8:15 AM**To:** Barry, Anna; Leeann Rottman; Larry Killmar; Terri Calleson; Jay Herrington; Scruggs, Pamela; Mary Cogliano; Doug.Warmolts@columbuszoo.org; jgaspard@pittsburghzoo.org; Michelle Pardo**Subject:** [EXTERNAL] Re: Lowry Park Zoological Society of Tampa LOA #90101C

Dear Ms. Barry-

Thank you for your email. We will immediately be working with the appropriate individuals to facilitate the process of transferring the manatees indicated below to our facility. We understand the Service's directives regarding Dr. Ball that will apply while the Service considers our application for reauthorization.

Going forward, can you confirm that ZooTampa (provided we abide by the conditions stated in your email and in our authorization) will be considered a full and active participant in manatee rescue and rehabilitation and will receive manatees in the regular course as we did previously? In other words, we want to confirm that it is not the Service's (or the MRP's or NFESO's) intention to limit our participation to only the four manatees listed below and

that we are eligible to receive manatees to the same extent as SeaWorld and the other MRP participants as rescue and rehabilitation needs arise?

Thank you,

Joe

Joseph A. Couceiro
President & CEO

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

Zootampa.org | [Facebook](#) | [Twitter](#) | [YouTube](#)

From: Barry, Anna <anna_barry@fws.gov>

Sent: Friday, March 8, 2019 4:11 PM

To: Joe Couceiro; Leeann Rottman; Larry Killmar; Terri Calleson; Jay Herrington; Scruggs, Pamela; Mary Cogliano; Doug.Warmolts@columbuszoo.org; jgaspard@pittsburghzoo.org

Subject: Lowry Park Zoological Society of Tampa LOA #90101C

Dear Mr. Couceiro,

Based on the information and confirmation we received from your office regarding your alternate veterinarians for your facility, and in consultation with our North Florida Ecological Services Office (NFESO) and the Manatee Rescue & Rehabilitation Partnership (MRP), the following manatees have been identified as animals available to be transferred to your facility. Again, we would like to reiterate that Dr. Ray Ball cannot have any activities or provide any consultation with manatees until a determination has been made on your application.

During the remainder of this review process, Dr. Lauren Smith and your manatee staff should consult with your alternate veterinarians and/or the Veterinary Committee of the MRP on any issues/procedures involving fluid therapy and feeding, post-rescue, sedation during transport, and euthanasia or any other issues or concerns you may have. Also, in accordance with your LOA, Section III, Provision 3 it states the following:

3. You must consult with and obtain NFESO approval prior to administering euthanasia.

Manatees Currently Recommended

Tm-1834: This is a conditionally non-releasable animal.

Tm-1857: This was a challenging refractory pneumothorax case that had a chest tube placed. There was some concern about a possible pleuritis and this animal is still under medical care with Dr. Erlacher-Reid.

Tm-1858: This was the calf that came in with Tm-1857. They have not been housed together in some time since arrival, but Tm-1858 is doing very well clinically and is not under medical care.

Tm-1861: This was a pneumothorax case that has resolved and is doing very well. Has not been handled since 12/14/18 and has not re-inflated. My understanding is that this manatee is medically cleared for release.

We were informed that Tm-1857 and Tm-1861 would likely be considered candidates for release in the near future. All four of these manatees were rescued from the west coast of Florida.

At this time we recommend that you contact Jon Peterson and Andy Garrett with the MRP to begin the coordination of the transfer of the manatees from SeaWorld to your facility. We request at this time that you contact NFESO and DMA once the transportation plan has been confirmed and after the manatees are received at your facility.

Please let us know if you have any questions.

Anna Barry
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Barry, Anna <anna_barry@fws.gov>

FW: Manatee Coverage for ZooTampa

Teresa Calleson <teresa_calleson@fws.gov>
To: Anna Barry <anna_barry@fws.gov>
Cc: Jay Herrington <Jay_Herrington@fws.gov>

Fri, Mar 8, 2019 at 3:37 PM

As requested, feedback from the Sea World vets. Perhaps, nothing formal from any of them.

Terri

From: DiRocco, Stacy [mailto:Stacy.DiRocco@seaworld.com]
Sent: Friday, March 08, 2019 3:09 PM
To: Teresa Calleson
Cc: Nollens, Hendrik; Peterson, Jon; Dold, Chris
Subject: RE: [EXTERNAL] Manatee Coverage for ZooTampa

Hi Terri,

Please see below regarding our discussions with Lauren Smith in response to the inquiry to provide backup manatee veterinary coverage for Zoo Tampa. We did offer to provide coverage as needed, dependent upon your recommendations.

Please let me know if you have any specific questions or would like to further discuss. It appears as if the attached letter lists Dr. Walsh as a SeaWorld veterinarian, rather than UF, and does not have any SeaWorld veterinarians named.

Thank you. Let us know how we can help.

Stacy

Stacy N. DiRocco, DVM

Senior Veterinarian SeaWorld Orlando

7007 SeaWorld Dr.

Orlando, FL 32821

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(407) 969-3863 – mobile



From: Lauren Smith [mailto:Lauren.Smith@ZooTampa.org]
Sent: Saturday, February 16, 2019 10:22 AM
To: DiRocco, Stacy
Cc: Nollens, Hendrik; Peterson, Jon; Larry Killmar
Subject: RE: [EXTERNAL] Manatee Coverage for ZooTampa

Good morning Stacy,

Thank you for getting back with me. Our CZO Dr. Larry Killmar spoke with Dr. Dold and made arrangements, as well as notified Teri with USFWS, so sounds like we are on track.

I have cc'ed Larry on this email, and will be in contact regarding future direction. Please don't hesitate to contact us with any questions.

Thank you!

Lauren

Lauren N. Smith, D.V.M.

Staff Veterinarian

ZooTampa at Lowry Park

1101 W. Sligh Ave.

Tampa, FL 33604

(813)935-8552 ext. 247

Fax (813) 930-0106

lauren.smith@zootampa.org



From: DiRocco, Stacy [mailto:Stacy.DiRocco@seaworld.com]
Sent: Tuesday, February 12, 2019 10:29 AM
To: Lauren Smith
Cc: Nollens, Hendrik; Peterson, Jon
Subject: RE: [EXTERNAL] Manatee Coverage for ZooTampa

Hi Lauren,

I am so sorry for the hold up. We were able to talk over options and certainly want to assist in whatever way we can. Typically in situations such as these, we often look to USFWS to advise and keep them in the loop and maintain transparency within the MRP since we are all in a partnership. As you know, when I went to Homosassa recently to help out, Teri was very helpful with the situation and was aware of their needs and our opportunity to work within the MRP to share resources. Would it be possible to reach out to her for guidance in this case as well? I think that will help and may avoid any confusion regarding whether we would be assisting as SeaWorld veterinarians within the MRP or as individual contractors.

From there we would just have to figure out logistics of scheduling and availability to see when you need coverage.

Let me know if this makes sense and sounds feasible. I know it is getting close to the dates when you need some time off. If it is best to set up a conference call to further discuss, let me know and we can do that too.

Stacy

Stacy N. DiRocco, DVM

Senior Veterinarian SeaWorld Orlando

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From: Lauren Smith [mailto:Lauren.Smith@ZooTampa.org]
Sent: Tuesday, January 22, 2019 3:07 PM
To: DiRocco, Stacy; Staggs, Lydia; Erlacher-Reid, Claire
Subject: RE: [EXTERNAL] Manatee Coverage for ZooTampa

Hello Stacy,

Hope things are well for all of you! I just wanted to follow up on the previous email to see if you had any additional information?

Thank you!

Lauren N. Smith, D.V.M.

Staff Veterinarian

ZooTampa at Lowry Park

1101 W. Sligh Ave.

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Fax (813) 930-0106

lauren.smith@zootampa.org



From: DiRocco, Stacy [mailto:Stacy.DiRocco@seaworld.com]
Sent: Friday, January 04, 2019 3:04 PM
To: Lauren Smith; Staggs, Lydia; Erlacher-Reid, Claire
Subject: RE: [EXTERNAL] Manatee Coverage for ZooTampa

Hi Lauren,

Happy New Year!

We also have had some shifts and changes with respect to our leadership team over here. Let me start by running this past our senior/corporate staff and see how we can help and then get back in touch ASAP. This totally makes sense and is a lot to have on one vet.

Talk to you soon!

Stacy

Stacy N. DiRocco, DVM

Senior Veterinarian SeaWorld Orlando

7007 SeaWorld Dr.

Orlando, FL 32821

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From: Lauren Smith [mailto:Lauren.Smith@ZooTampa.org]
Sent: Friday, January 04, 2019 2:33 PM
To: DiRocco, Stacy; Staggs, Lydia; Erlacher-Reid, Claire
Subject: [EXTERNAL] Manatee Coverage for ZooTampa

Hello Doctors-

Happy New Year! =) I hope you all enjoyed your holidays!

It has been awhile since we last spoke, but I wanted to circle back with you guys. We (ZooTampa) are still waiting to hear back about approval to receive manatees again, but in anticipation, I have been asked by my director to reach out to colleagues regarding back up veterinary support. As you may have heard, Dr. Ball has returned to the zoo but will not be overseeing care of manatees until further notice. This leaves all veterinary care to one doctor, and so we want to be prepared for coverage when I'm away (like for example.. I'm getting married in March!).

I just wanted to get an idea if you all would be willing to provide support. We would certainly be able to write a contract, etc and make sure it is approved by your senior staff as well. I am happy to discuss this more over the phone to answer any questions. I have also considered Dr. Shelly Marquardt at CMA, but I'm not sure that she is considered a "qualified critical care" veterinarian.

Thank you in advance!

Lauren

Lauren N. Smith, D.V.M.

Staff Veterinarian

ZooTampa at Lowry Park

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Fax (813) 930-0106

lauren.smith@zootampa.org





Barry, Anna <anna_barry@fws.gov>

[EXTERNAL] Request for Conference Call on Monday

1 message

Rhonda Horn <Rhonda.Horn@zootampa.org>
To: "anna_barry@fws.gov" <anna_barry@fws.gov>

Fri, Dec 7, 2018 at 1:56 PM

Hi Ms. Barry,

We are planning to submit our report this afternoon and would like to set up a call with you at 9:00 am on Monday? Will that work for you?

Thank you,

Rhonda

Rhonda Horn
Executive Assistant to the CEO

ZooTampa at Lowry Park
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[ZooTampa.org](#) | [Facebook](#) | [Twitter](#) | [YouTube](#)





Joseph A. Couceiro
Chief Executive Officer

December 20, 2018

JAN 29 2019

Anna Barry
Senior Biologist
Branch of Permits, Division of Management Authority
United States Fish & Wildlife Service
5275 Leesburg Pike, MS:IA
Falls Church, VA 22041-3803

**Re: Lowry Park Zoological Society of Tampa
Renewal of Authorization for Manatee Rescue, Rehabilitation and Release (Federal
Fish and Wildlife Permit No. MA770191-5)**

Dear Ms. Barry:

This letter responds to your December 7, 2018 email correspondence in which the U.S. Fish and Wildlife Service ("FWS") requested additional information related to Lowry Park Zoological Society of Tampa's ("ZooTampa" or "the Zoo") request to renew authorization under the Marine Mammal Protection Act and the Endangered Species Act to rescue, rehabilitate, release and post-release monitor manatees. More specifically, this latest inquiry relates back to additional allegations against Dr. Ray Ball, which purportedly were presented to Craig Pugh (former CEO) and Elizabeth Hennig (current Sr. VP/Chief Financial Officer) on September 26, 2012. It is suggested that the Zoo took no action in response to these concerns. As we explain below, some concerns were raised and the Zoo responded appropriately. Below we have provided a summary of what occurred, the steps taken at the time to effectively address staff concerns, followed by a response to each of the specific concerns.

Background

By way of background, Dr. Ball was hired by the Zoo in September 2010. From the period following his hire to the alleged report in September 2012, some tension developed between members of the Florida Mammals team at the Zoo and Dr. Ball. After several concerns were raised about veterinary care – and in order to get a better understanding of the situation – then CEO Craig Pugh held a series of meetings during this time frame with the animal care staff without the presence of Animal Care Managers or Curators present to ensure "safe," comfortable and open dialogue. As a result of these meetings, and in an effort to continue providing avenues to address animal care concerns, in December 2012, through the encouragement of Craig Pugh, Jennifer (Blank) Galbraith began developing an outline for a new animal welfare committee to insure

animal caretakers had a voice and a mechanism for sharing concerns. Further, Dr. Ball was sent to Leadership Training in December 2012.

To examine whether any reasons existed for concern about Dr. Ball's actual medical care practices, the management team (Craig Pugh, CEO, Dr. Larry Killmar, Chief Zoological Officer and Elizabeth Hennig, then CFO and Director of Administration) brought in two outside veterinarians to conduct a formal review, inviting them to evaluate and inspect the medical sciences program from top to bottom. The Zoo reached out to the veterinarians to arrange the review on February 26, 2013. The actual evaluation was conducted May 13-14, 2013, and a report was submitted to the Zoo on June 10, 2013.

That report, a copy of which is attached, commended the Zoo's "excellent" achievement of the requirements and expectations of the American Association of Zoo Veterinarians (AAZV) and the Association of Zoos & Aquariums (AZA). See Attachment A at 1 (Executive Summary – Lowry Park Zoo Program of Veterinary Care Assessment). They also commended Dr. Ball's "harm:benefit based approach to preventive medicine and collection management" but made some recommendations regarding the need for ongoing communication and dialogue and updating of procedures. Id. Nothing in the report suggested that issues existed regarding medical competence.

Specific Issues

Against this backdrop, our response to the specific issues raised by FWS are summarized below.

A. Issues Related to Manatee "Dana"

1. Use of Radiograph with Chest Tap

FWS has asked us to respond to issues related to manatee "Dana" (#103003), specifically with respect to chest tap procedures. The subject of chest taps and their use in the treatment of manatees was well documented in our prior response on this subject. See FWS Response dated 12/7/2018, pages 4-6, section I.

The attached records for manatee #103003 summarize the course of treatment administered. See Attachment B (5/8/2012 through 7/14/2012 Medical Records for Manatee #103003). As indicated by the records, pneumothorax was an issue, and multiple chest taps were performed. The concern that was raised suggests that the initial taps were somehow incorrectly placed because radiographs were not used in connection with the procedure. Such an assertion fails to recognize that radiographs are not considered standard for chest taps. This is because they often are not the most accurate due to the need for multiple views to obtain a three dimensional perspective, the lag time between the radiograph procedure and the actual chest tap due to the need to review and interpret film, and the possibility of a change in condition due to the shifting of the animal during the procedure. Radiographs also would have required moving the manatee to the hospital, which for manatee #103003 was not advised because it would be painful and the animal was fractious (irritable). Ultrasound (US), percussion, or palpate are all more common and effective methods that can be used to perform chest taps. Even then, the size and condition of the animal can make it difficult to locate the exact air placement, meaning several taps can be required.

2. Location of Procedure

FWS asked us to respond to an issue that was raised about wound treatment not being performed in a sterile environment. In the course of manatee medical care, numerous procedures are performed on the pool deck, including treatment of wounds. Opening a contaminated wound in the manner as described in the medical record (for change of dressing, lavage with sterile water and packing of wound) is an acceptable practice. Abscesses are often drained in this manner, and it is simply not possible to sterilize a wound like the one presented here. Indeed, the medical record notes from June 16, 2012, reflect improvement following the procedure.

3. Administration of Antibiotic

FWS also indicated that an issue has been raised about the administration of an antibiotic; specifically, that a drug administered orally should have been administered by injection. The administration of medication also was addressed in our prior correspondence, in which it was noted that veterinary experience and clinical judgment informed decisions regarding medication selection and administration. See FWS Response dated 12/7/2018, page 11. These decisions are often informed by the individual animal's unique circumstances and medical history. In this instance, the July 3, 2012 medical notes reflect the underlying rationale for the antibiotic and why the route of administration (oral) was thought to be effective. Specifically, the treating veterinarian determined that an alternative route of administration was needed because of this manatee's particular wounds, surgery, and tendency to form abscesses and/or hematomas.

B. Issues Related to Manatee "Maggie"

FWS asked us to respond to an allegation that Dr. Ball "lied" to the Zoo's Florida Mammals team about receiving approval from former animal care supervisor Virginia Edmonds prior to euthanizing manatee #102981 ("Maggie"). To the best of our recollection, this was a point of dispute that arose between several staff members after the March 7, 2012 humane euthanasia of manatee #102981. The medical records for this manatee reflect both Zoo staff and Florida Fish and Wildlife (FWC) consultation on euthanasia on March 6, 2012. See Attachment C (3/5/2012 through 3/7/2012 Medical Records for Manatee #102981). The dispute seemed to be over whether the Zoo's Animal Care Manager (Edmonds) had "approved" the procedure, or whether it was simply discussed.¹ In order to prevent such disputes going forward, the Zoo adopted a written euthanasia policy in September 2012 that detailed the consultation expected to occur to insure that animal care staff had input into such decisions. See Attachment D (Euthanasia Policy, effective 9/5/2012).

¹ At the time of the dispute, Ms. Edmonds was employed by the Zoo as an Animal Care Manager. She had both field work and administrative/supervisory duties in the Florida Mammals division, but was not a veterinarian. Ms. Edmonds is no longer employed by the Zoo. She currently is a member of the Manatee Rescue & Rehabilitation Partnership ("MRP").

C. Giraffe Necropsy Conducted in Manatee Hospital

FWS also asked us to confirm whether the Zoo had performed a necropsy of a giraffe in the manatee hospital. The Zoo can confirm that this is correct, but was not inappropriate. On August 27, 2011, a deceased giraffe was moved to the climate-controlled clinic area adjacent to the manatee pools. At that time, the use of this area was not limited exclusively to manatees. This facility was deemed suitable for necropsy of the large ungulate (giraffe) for a period of time during which portions of the Zoo's old veterinary hospital were under demolition in order to make way for construction of a new veterinary hospital. As is the case with any necropsy, proper sanitation practices are followed to avoid any risk to other animals.

D. Issues Related to Manatee "Amanda"

The fourth issue that FWS asked the Zoo to address concerned manatee #HS8601 ("Amanda") and allegations that she died during a biopsy of a mammary mass after experiencing compromised anesthesia/ventilation. Medical issues and treatment related to manatee #HS8601 were addressed in our prior correspondence. See FWS Response dated 12/7/2018, page 11, section B, paragraph 2.

Summary

We do not dispute that some staff concerns were raised with the Zoo over six years ago, in 2012. However, the Zoo acted reasonably in response by: (1) meeting with staff privately to understand concerns; (2) arranging an outside veterinary team to review medical practices; (3) sending Dr. Ball to leadership training; (4) creating a euthanasia policy to insure internal consultations were conducted and documented; and (5) creating an Animal Welfare Committee process to address any future general concerns. As these concerns were analyzed and addressed in a timely matter back when they occurred, we respectfully submit that none of them properly form a basis to deny the renewal of the Zoo's authorization to rescue, rehabilitation, and release manatees.

As previously indicated, we remain committed to answering all of FWS's questions regarding our current manatee program and manatee professionals. We are able to discuss these issues by telephone or in person in your offices at your convenience.

Sincerely,



Joseph A. Couceiro
President and CEO

Attachments



Barry, Anna <anna_barry@fws.gov>

Lowry Park Zoological Society of Tampa – Response to 12/7/2018 FWS Correspondence

1 message

Barry, Anna <anna_barry@fws.gov>

Tue, Feb 5, 2019 at 4:38 PM

To: Joe Couceiro <Joe.Couceiro@zootampa.org>

Cc: Rhonda Horn <Rhonda.Horn@zootampa.org>, "Pamela_scruggs@fws.gov" <Pamela_scruggs@fws.gov>, Larry Killmar <Larry.Killmar@zootampa.org>, Mary Cogliano <mary_cogliano@fws.gov>

Dear Mr. Joseph A. Couceiro,

Based on our conference call of November 8th, we were expecting the unedited reports from Mr. James Gesualdi and the Veterinarian Panel. When will these documents be provided?

Also, as stated in our October 22, 2018, letter, Dr. Lauren Smith is currently accepted as lead veterinarian for the manatees until this issue is resolved.

Sincerely,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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On Tue, Jan 29, 2019 at 9:56 AM Joe Couceiro <Joe.Couceiro@zootampa.org> wrote:

Anna, welcome back. I am so sorry you and your team had to go through the government shutdown. I hope you, and everyone, are well.

Just checking in... we are still on hold and not being able to help care for manatees while other institutions are over capacity. We of course would appreciate an all-clear at earliest convenience. However, if you need time to further assess our reports - we also are ready to move on immediately - as originally agreed - with Dr Lauren Smith (not Dr Ball) as our lead manatee care vet.

Any update or assistance would be sincerely appreciated.

Best,

Joe

Joseph A. Couceiro

President & CEO

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

Zootampa.org | [Facebook](#) | [Twitter](#) | [YouTube](#)

cid:image003.png@01D3B6FD.15CBB850

Lowry Park Zoological Society of Tampa – Response to 12/7/2018 FWS Correspondence

Barry, Anna <anna_barry@fws.gov>

Wed 2/6/2019 3:10 PM

To: Calleson, Teresa <teresa_calleson@fws.gov>

FYI

----- Forwarded message -----

From: **Joe Couceiro** <Joe.Couceiro@zootampa.org>

Date: Wed, Feb 6, 2019 at 6:00 AM

Subject: [EXTERNAL] Re: Lowry Park Zoological Society of Tampa – Response to 12/7/2018 FWS Correspondence

To: Barry, Anna <anna_barry@fws.gov>

Cc: Rhonda Horn <Rhonda.Horn@zootampa.org>, Pamela_scruggs@fws.gov <Pamela_scruggs@fws.gov>, Larry Killmar <Larry.Killmar@zootampa.org>, Mary Cogliano <mary_cogliano@fws.gov>, Michelle Prado <mcpardo@duanemorris.com>, Debbie Brown <Debbie.Brown@zootampa.org>

Anna-

Thank you for your email.

I think there has been some misunderstanding about the actions the Zoo undertook, and documents that were prepared, in connection with FWS's original questions about our manatee program and our subsequent submissions to the agency. I think it would be beneficial to have a brief conference call so that we can answer your questions. We also have a clarifying question regarding your approval of Dr. Smith to serve as lead veterinarian for the manatees.

Please let me know what dates/times may work and we can set up the conference call.

Many thanks,

Joe

Joseph A. Couceiro

CEO / President

ZooTampa at Lowry Park

On Feb 5, 2019, at 4:39 PM, Barry, Anna <anna_barry@fws.gov> wrote:

Dear Mr. Joseph A. Couceiro,

Based on our conference call of November 8th, we were expecting the unedited reports from Mr. James Gesualdi and the Veterinarian Panel. When will these documents be provided?

Also, as stated in our October 22, 2018, letter, Dr. Lauren Smith is currently accepted as lead veterinarian for the manatees until this issue is resolved.

Sincerely,

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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Anna, welcome back. I am so sorry you and your team had to go through the government shutdown. I hope you, and everyone, are well.

Just checking in... we are still on hold and not being able to help care for manatees while other institutions are over capacity. We of course would appreciate an all-clear at earliest convenience. However, if you need time to further assess our reports - we also are ready to move on immediately - as originally agreed - with Dr Lauren Smith (not Dr Ball) as our lead manatee care vet.

Any update or assistance would be sincerely appreciated.

Best,

Joe

Joseph A. Couceiro

President & CEO

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

Zootampa.org | [Facebook](#) | [Twitter](#) | [YouTube](#)

cid:image003.png@01D3B6FD.15CBB850



Barry, Anna <anna_barry@fws.gov>

FW: back-up veterinary coverage

2 messages

Teresa Calleson <teresa_calleson@fws.gov>

Fri, Feb 15, 2019 at 1:22 PM

To: Anna Barry <anna_barry@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Mary Cogliano <mary_cogliano@fws.gov>

Cc: Jay Herrington <Jay_Herrington@fws.gov>, Larry Killmar <larry.killmar@lowryparkzoo.org>, Leeann Rottman <leeann.rottman@lowryparkzoo.org>

Hi Anna, Mary and Pam,

This morning, the North Florida Ecological Services Office (NFESO) received the email correspondence below from Dr. Killmar at ZooTampa. Just letting you know that Jay and I have discussed and that we are fine with Dr. Killmar's suggestions for backup veterinary services. I'm familiar with all of the Sea World vets, Dr. Walsh (Univ of Florida), and both Dr. Persky and Dr. Jafarey from the Jacksonville Zoo and can supply their resumes/CVs, if needed. All of their resumes/CVs are part of their individual facility's packages (sent to Anna) as part of the ongoing permit renewal process. All are qualified manatee vets and should meet the requirements to provide critical care veterinary services as backups for this facility. Typically, during the Letter of Authorization process, I believe that the Division of Management Authority (DMA) typically requests that I have the facility provide you with the written documentation of these arrangements (i.e. contracts, agreements, etc.) but I will defer to how you see best to proceed from this point, as the permitting entity, for the US Fish and Wildlife Service. For example, Dr. Walsh also has such an agreement with Clearwater Marine Aquarium. Thanks so much and thanks to Dr. Killmar for providing these alternative vets for consideration! With DMA being the permitting entity, NFESO would like to request that DMA provide your response regarding the alternative veterinary arrangements to ZooTampa staff as soon as possible. Thanks!

Terri Calleson

Fish and Wildlife Biologist

U.S. Fish and Wildlife Service

7915 Baymeadows Way, Suite 200

Jacksonville, Florida 32256-7517

904-731-3286 (office)

Email: Teresa_Calleson@fws.gov

<http://www.fws.gov/northflorida>

From: Larry Killmar [mailto:Larry.Killmar@ZooTampa.org]

Sent: Friday, February 15, 2019 9:53 AM

To: teresa_calleson@fws.gov; Jay_herrington@fws.gov

Cc: Larry Williams (larry_williams@fws.gov); Joe Couceiro; Pardo, Michelle; Leeann Rottman; Lauren Smith; Dold, Chris

Subject: [EXTERNAL] back-up veterinary coverage

Jay and Terri, I have been in discussions with Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, about providing Dr. Lauren Smith, with back-up veterinary services for manatee care from his staff, if the need arises. He has agreed

and asked that I contact you and receive the services endorsement to that effect. SeaWorld's staff would be in addition to Dr. Mike Walsh and the veterinary staff of the Jacksonville Zoo, Dr. Meredith Persky and Dr. Yousuf Jafarey, who will serve in that same capacity. As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

1101 W Sligh Ave, Tampa, FL 33604 | 813.935.8552

ZooTampa.org | Facebook | Twitter | YouTube



Consider the environment;

Think before you print!



Cogliano, Mary <mary_cogliano@fws.gov>
To: Anna Barry <anna_barry@fws.gov>

Wed, Feb 20, 2019 at 8:17 PM

Hi Anna,

Given the below, tomorrow lets discuss how we move forward from here.

Thanks,

Mary

[Quoted text hidden]

--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

2 attachments



image001.png
17K



image002.png
2K



Barry, Anna <anna_barry@fws.gov>

ZooTampa

1 message

Barry, Anna <anna_barry@fws.gov>
To: Larry Killmar <Larry.Killmar@zootampa.org>

Tue, Feb 19, 2019 at 1:42 PM

Received, thanks.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
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On Mon, Feb 18, 2019 at 6:26 AM Larry Killmar <Larry.Killmar@zootampa.org> wrote:

Anna Barry and Mary Cogliano,

To confirm, we have the following veterinarians as backups for Dr. Lauren Smith if the need arises:

- 1) Dr. Mike Walsh
- 2) Jacksonville Zoo veterinarians, Dr. Meredith Persky and Dr. Yousuf Jafarey
- 3) Dr. Chris Dold, Chief Zoological Officer, SeaWorld Parks, has agreed to provide his veterinary staff at SeaWorld as well once he receives endorsement to that effect from the service. You should have an e-mail dated February 15, 2019 from Terri Calleson to that effect.

As you are aware, all the veterinarians mentioned are highly qualified in the care and treatment of manatees.

Regards and I look forward to your response,

Larry

Dr. Lawrence E. Killmar

Chief Zoological Officer

Sr. V/P Animal Science and Conservation

Zoo Director

Office: 813.933.8120 (Note: my new direct office number)

Cell: 813.777.4610

Larry.Killmar@ZooTampa.org

ZooTampa at Lowry Park

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Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

Cogliano, Mary <mary_cogliano@fws.gov>

Thu 2/28/2019 5:19 PM

To: Barry, Anna <anna_barry@fws.gov>

 1 attachments (17 KB)

20190221_RD_MRP_Response_Timeline_clean.docx;

----- Forwarded message -----

From: **A Alvarez** <aeric_alvarez@fws.gov>

Date: Sun, Feb 24, 2019 at 4:42 PM

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Mary Cogliano <mary_cogliano@fws.gov>, <gloria_bell@fws.gov>, <pamela_scruggs@fws.gov>

Here it is. I forgot that the attachment gets stripped off when one replies to the email.

A. Eric Alvarez
Acting Assistant Director
International Affairs

703-447-1064 (C)

703-358-2410 (O)

Begin forwarded message:

From: "Frazer, Gary" <gary_frazer@fws.gov>

Date: February 23, 2019 at 11:00:51 PM EST

To: A Alvarez <aeric_alvarez@fws.gov>, Pamela Scruggs <pamela_scruggs@fws.gov>, Shawn Finley <Shawn.Finley@sol.doi.gov>

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

FYI

Gary Frazer
Assistant Director -- Ecological Services
U.S. Fish and Wildlife Service
(202) 208-4646

----- Forwarded message -----

From: **Miranda, Leopoldo** <leopoldo_miranda@fws.gov>

Date: Fri, Feb 22, 2019 at 8:49 PM

Subject: Fwd: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Gary Frazer <gary_frazer@fws.gov>

FYI -

Leopoldo "Leo" Miranda
Regional Director
U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, GA 30345
404-679-4000
Leopoldo_Miranda@fws.gov

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----- Forwarded message -----

From: **Arnold, Jack** <jack_arnold@fws.gov>

Date: Fri, Feb 22, 2019 at 6:15 PM

Subject: Re: ACTION - Requesting Internal Inquiry on Manatee Rehabilitation and Rescue Partnership (MRP)

To: Miranda, Leopoldo <leopoldo_miranda@fws.gov>

Cc: Mike Oetker <michael_oetker@fws.gov>, Larry Williams <Larry_Williams@fws.gov>, Jay Herrington <Jay_Herrington@fws.gov>

Leo, Mike - I tasked Larry and Jay to develop the plan/timeline requested, and received the attached today. I believe this meets the intent of your request. If, after review, you have questions or would like to discuss further, please let me know - I'll be happy to schedule a briefing with you, me, Larry, Jay, and anyone else who needs to attend.

Thanks,

Jack Arnold
Acting Assistant Regional Director - Ecological Services
U.S. Fish and Wildlife Service
1875 Century Blvd.
Atlanta, GA 30345
404-679-7311 office
404-679-7081 fax
703-789-5620 cell

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On Fri, Feb 15, 2019 at 12:58 PM Miranda, Leopoldo <leopoldo_miranda@fws.gov> wrote:

Jack,

Recent developments at Zoo Tampa have exposed potential procedural and compliance problems in the way we manage and interact with the MRP. This was further highlighted by Eric Sutton's email to Gary Frazer on February 11, 2019. After talking to Gary and getting further clarification from Eric on his concerns, I would like the ES program to conduct an inquiry on how we interact with the WRP. I fully recognize that this is a long-standing partnership that has contributed significantly to the conservation of the West Indian manatee. My main objective with this inquiry is to clarify what are the roles and responsibilities of this group in relation to our (both FWS and State/territorial fish and wildlife agencies) fiduciary responsibilities and legal mandates, both under the MMPA and the ESA. Dual authorities and administrative chain of command (i.e., HQ Division of Management Authority (DMA) and the Southeast Region) complicates the situation even further. So I ask that you coordinate these efforts with DMA too.

There are two main authorities to manage the West Indian Manatee (ESA and MMPA). What I will need is for your ES team that deals with West Indian manatee and the MRP (e.g., JAX and BOQ) performs an internal inquiry addresses the following topics:

- **Roles and responsibilities of the FWS, the State/territory and those of the MRP.**
- **Clearly define what are the administrative/compliance procedures that needs to be followed under each authority.**
- **Identify the overlaps and any potential area of conflict between the authorities.**
- **Identify opportunities to increase efficiencies and benefits to the species.**
- **Identify any other issues that may be exposed during your inquiry.**
- **Develop recommendations on how to solve any of the conflicts with a pros/cons analysis.**

- **Identify a recommended path forward.**

Please take a look at this request and by Friday February 22, provide plan of how you will proceed and a proposed time-line. Before I close my note, I want to make it very clear that we value this long-established partnership and the main goal of this request is to find ways to better promote the conservation of the West Indian Manatee.

Thanks!

Leo

Leopoldo "Leo" Miranda
Regional Director
U.S. Fish and Wildlife Service
1875 Century Boulevard
Atlanta, GA 30345
404-679-4000
Leopoldo_Miranda@fws.gov

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--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

Manatee Rescue and Rehabilitation Partnership (MRP) Internal Review Project Completion Plan and Time Line

Purpose: Recent developments at ZooTampa exposed potential procedural and compliance issues in the way we manage and interact with the MRP. A Florida Fish and Wildlife Conservation Commission (FWC) Executive Director (ED) email to USFWS Assistant Director for Endangered Species (AD-ES) on February 11, 2019, further highlighted questions regarding the Service and MRP roles and responsibilities. After conversations between the Southeast Regional Director (RD) and the AD-ES, as well as the FWC-ED, the RD asked the Ecological Services (ES) program to conduct an internal review on how the MRP functions and how we interact with the MRP. The RD recognizes the importance of this long-standing partnership and their contributions to the West Indian manatee conservation. The primary objective of this review is to clarify the roles and responsibilities of this group as they relate to both FWS and State/territorial fish and wildlife agencies fiduciary responsibilities and legal mandates. Additionally, dual authorities and administrative chain of command (i.e., HQ Division of Management Authority (DMA) and the Southeast Region) may further complicate program administration and, as such, the RD asks ES to coordinate these efforts with WO-DMA.

Action Plan: There are two principal authorities for managing the West Indian Manatee: the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). Each with their specific administrative processes. The RD asks the ES manatee leads and related staffs to perform an internal review addressing the topics outlined below within the context of those authorities. The staffs are implementing the following action plan in response to the RD's request and targeting a final report on or before April 19, 2019.

Phase One

Staffs develop succinct responses to RD items 1 through 5.

1. Roles and responsibilities of the FWS, the State/territory and those of the MRP.
2. Clearly define the administrative/compliance procedures that need to be followed under each authority.
3. Identify the overlaps and any potential area of conflict between the authorities.
4. Identify opportunities to increase efficiencies and benefits to the species.
5. Identify any other issues that may be exposed during your review.

Completion Phase One: March 11, 2019

Phase Two

Staffs develop succinct responses to RD items 6 and 7.

6. Develop recommendations on how to solve any of the conflicts with a pros/cons analysis.
7. Identify a recommended path forward.

Completion Phase Two: March 31, 2019

Phase Three

Staff develops a final report for presentation to the RD.

Draft Report for internal staff review: April 12, 2019

Completion Phase Three (Final Report): April 19, 2019

[EXTERNAL] Manatee Rescue & Rehabilitation Partnership

Joseph Gaspard <jgaspard@pittsburghzoo.org>

Fri 12/21/2018 4:06 PM

To: Valade, Jim <jim_valade@fws.gov>; Calleson, Teresa <teresa_calleson@fws.gov>**Cc:** Barry, Anna <anna_barry@fws.gov>; Cogliano, Mary <mary_cogliano@fws.gov>; Doug Warmolts <doug.warmolts@columbuszoo.org>; Joseph Gaspard <jgaspard@pittsburghzoo.org> 1 attachments (127 KB)

MRP Steering Committee Letter to USFWS - 12_21_2018.pdf;

Good afternoon, Jim and Terri.

The MRP Steering Committee has held numerous discussions regarding ZooTampa, a valuable MRP Partner, and the allegations raised involving their veterinarian, Dr. Ray Ball. As we have noted on calls with you both, on behalf of the Service, the MRP has the least amount of information regarding this situation and is unable to make an informed recommendation at this time. Please find a formal letter from the MRP Steering Committee attached to this e-mail stating our position.

Doug and I can be available for a call if you would like to discuss further.

Best,
Joe and DougJoseph Gaspard, Ph.D.
Director of Science and Conservation
Pittsburgh Zoo & PPG Aquarium
One Wild Place
Pittsburgh, PA 15206-1178jgaspard@pittsburghzoo.org
Office - 412-365-2642
Fax - 412-365-2583 zoologo-workable-copy2 AHA Cert Logo

----- Forwarded message -----

From: **Joseph Gaspard** <jgaspard@pittsburghzoo.org>

Date: Fri, Nov 2, 2018 at 9:20 AM

Subject: [EXTERNAL] Manatee Rescue and Rehabilitation Partnership

To: mary_cogliano@fws.gov <mary_cogliano@fws.gov>

Cc: Joseph Gaspard <jgaspard@pittsburghzoo.org>, doug.warmolts@columbuszoo.org
<doug.warmolts@columbuszoo.org>

Dear Mary,

As the Co-Chair and Past-Chair of the Manatee Rescue and Rehabilitation Partnership, we are looking to gain a better understanding of the current concerns involving Dr. Ray Ball, veterinarian at ZooTampa, and assisting Homosassa Springs Wildlife State Park and Jacksonville Zoo. We have learned that a letter was sent by DMA in response to numerous complaints about alleged questionable activities and decisions which have possibly resulted in poor animal welfare and/or mortality of manatees under his supervision. As we also understand, the letter did not include a summary of all of the complaints and may not have selected examples that discern the broader scope of the alleged issues. We look to gain some clarity on how this affects the operations currently being carried out at MRP facilities including 3 critical care facilities with which Dr. Ball was associated.

The MRP Chairs would like to offer assistance that would aid in continuing the operation of all facets of MRP partners at a time when resources and space are already severely limited. We can also offer support in the review of these complaints by our members, as has been done in the recent past.

Thank you,

Joe Gaspard and Doug Warmolts

Joseph Gaspard, Ph.D.

Director of Science and Conservation

Pittsburgh Zoo & PPG Aquarium

One Wild Place

Pittsburgh, PA 15206-1178

jgaspard@pittsburghzoo.org

Office - 412-365-2642

Fax - 412-365-2583

 zoologo-workable-copy2

 AHA Cert Logo

--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

--

Mary Cogliano, Ph.D.
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803
Phone: (703) 358-1991

[EXTERNAL] Manatee Rescue & Rehabilitation Partnership

Joseph Gaspard <jgaspard@pittsburghzoo.org>

Tue 2/19/2019 11:06 AM

To: Scruggs, Pamela <pamela_scruggs@fws.gov>; Cogliano, Mary <mary_cogliano@fws.gov>; Barry, Anna <anna_barry@fws.gov>

Cc: Doug.Warmolts@columbuszoo.org <Doug.Warmolts@columbuszoo.org>

Good morning,

On behalf of the MRP, I wanted to thank you for taking the time to discuss the manatee program, our cooperative relationship, and the current issue which we are working through. It was very valuable to gain an improved understanding of your office's insight. Hopefully it was helpful to DMA as we presented what the MRP understands as its role in the program to progress the conservation of manatees.

Please know that you have an open invitation to attend our biannual meetings which are typically held in the spring and fall, strategically so to help plan/review our efforts such as rescues and releases involving our Partners. Our next meeting will be held in St. Petersburg, FL on April 4th.

Doug and I will be attending the AMMPA meeting in DC next week and could meet for further discussions, if so desired.

Best,
Joe

Joseph Gaspard, Ph.D.
Director of Science and Conservation
Pittsburgh Zoo & PPG Aquarium
One Wild Place
Pittsburgh, PA 15206-1178

jgaspard@pittsburghzoo.org
Office - 412-365-2642
Fax - 412-365-2583





United States Department of the Interior



FISH AND WILDLIFE SERVICE
International Affairs
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803

March 7, 2019

Mr. Joe Gaspard
Mr. Doug Warmolts
Pittsburgh Zoo & PPG Aquarium
One Wild Place
Pittsburgh, Pennsylvania 15206-1178

Dear Mr. Gaspard and Mr. Warmolts:

This responds to your letter of December 20, 2018, regarding ZooTampa's ability to receive manatees while we are reviewing their authorization under the Marine Mammal Protection Act (MMPA) [16 U.S.C. sections 1379(h), 1382 (c) and under the U.S. Endangered Species Act (ESA) section 10(a)(1)(A). Due to alleged activities of their lead veterinarian Dr. Ray Ball, which are alleged not to be consistent with the "Guidelines for Release of Rehabilitated West Indian Manatees" and the "Special Conditions of Critical Care and Rehabilitation/Holding Facilities" found in their Letter of Authorization (LOA), we informed ZooTampa that Dr. Ball must cease all activities with manatees. On October 23, 2018, we were informed by ZooTampa that Dr. Ball would cease work on manatees both in their facility and out in the field and that Dr. Lauren Smith was now their lead veterinarian for manatees. Zoo Tampa has also informed us that Dr. Mike Walsh (SeaWorld) and Dr. Meredith Persky and Dr. Yousuf Jafarey (Jacksonville Zoo) will serve as alternate veterinarians when the facility veterinarian is not available.

While we review the material forwarded to us by ZooTampa in response to our October 22, 2018, letter, ZooTampa may continue to receive manatees and operate under its current LOA. During this review process, Dr. Ball may not have any involvement with the manatees; thus, ZooTampa's other assigned veterinary staff and alternate veterinarians, as described above, will be responsible for all treatment and care of manatees housed at ZooTampa. As we have discussed with you in recent conversations, the U.S. Fish and Wildlife Service has sole authority for determining placement of manatees within facilities that possess active LOAs. The Service's North Florida Ecological Services Office (NFESO), in coordination with the Division of Management Authority, will continue to determine placement of manatees at ZooTampa and other authorized facilities.

Sincerely,

Mary Coglian, Ph.D.
Chief, Branch of Permits
Division of Management Authority

ZooTampa

Barry, Anna <anna_barry@fws.gov>

Thu 3/7/2019 5:56 PM

To: jgaspard@pittsburghzoo.org <jgaspard@pittsburghzoo.org>; Doug.Warmolts@columbuszoo.org <Doug.Warmolts@columbuszoo.org>

Cc: Cogliano, Mary <mary_cogliano@fws.gov>; Scruggs, Pamela <pamela_scruggs@fws.gov>; Calleson, Teresa <teresa_calleson@fws.gov>; Herrington, Jay <jay_herrington@fws.gov>

 1 attachments (48 KB)

19_03_07_90101C_MRP.pdf;

Dear Mr. Gaspard and Mr. Warmolts,

Please see the attached letter concerning authorization for ZooTampa to receive and maintain manatees under the Manatee Rescue and Rehabilitation Program. We understand that you have been working with our North Florida Ecological Services Office to recommend specific manatees to be transferred to ZooTampa. We request that by noon tomorrow you provide us with the identification of those manatees you recommend to be transferred to ZooTampa. We will respond with our final decision on those transfers by COB tomorrow.

Sincerely

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
Branch of Permits, MS: IA
5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
Fax: 703-358-2281
E-mail: Anna_Barry@fws.gov

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Lowry Park Zoological Society of Tampa LOA #90101C

Barry, Anna <anna_barry@fws.gov>

Fri 3/8/2019 4:11 PM

To: Joe Couceiro <Joe.Couceiro@zootampa.org>; Leeann Rottman <leeann.rottman@zootampa.org>; Larry Killmar <Larry.Killmar@zootampa.org>; Calleson, Teresa <teresa_calleson@fws.gov>; Herrington, Jay <jay_herrington@fws.gov>; Scruggs, Pamela <pamela_scruggs@fws.gov>; Cogliano, Mary <mary_cogliano@fws.gov>; Doug.Warmolts@columbuszoo.org <Doug.Warmolts@columbuszoo.org>; jgaspard@pittsburghzoo.org <jgaspard@pittsburghzoo.org>

Dear Mr. Couceiro,

Based on the information and confirmation we received from your office regarding your alternate veterinarians for your facility, and in consultation with our North Florida Ecological Services Office (NFESO) and the Manatee Rescue & Rehabilitation Partnership (MRP), the following manatees have been identified as animals available to be transferred to your facility. Again, we would like to reiterate that Dr. Ray Ball cannot have any activities or provide any consultation with manatees until a determination has been made on your application.

During the remainder of this review process, Dr. Lauren Smith and your manatee staff should consult with your alternate veterinarians and/or the Veterinary Committee of the MRP on any issues/procedures involving fluid therapy and feeding, post-rescue, sedation during transport, and euthanasia or any other issues or concerns you may have. Also, in accordance with your LOA, Section III, Provision 3 it states the following:

3. You must consult with and obtain NFESO approval prior to administering euthanasia.

Manatees Currently Recommended

Tm-1834: This is a conditionally non-releasable animal.

Tm-1857: This was a challenging refractory pneumothorax case that had a chest tube placed. There was some concern about a possible pleuritis and this animal is still under medical care with Dr. Erlacher-Reid.

Tm-1858: This was the calf that came in with Tm-1857. They have not been housed together in some time since arrival, but Tm-1858 is doing very well clinically and is not under medical care.

Tm-1861: This was a pneumothorax case that has resolved and is doing very well. Has not been handled since 12/14/18 and has not re-inflated. My understanding is that this manatee is medically cleared for release.

We were informed that Tm-1857 and Tm-1861 would likely be considered candidates for release in the near future. All four of these manatees were rescued from the west coast of Florida.

At this time we recommend that you contact Jon Peterson and Andy Garrett with the MRP to begin the coordination of the transfer of the manatees from SeaWorld to your facility. We request at this time that you contact NFESO and DMA once the transportation plan has been confirmed and after the manatees are received at your facility.

Please let us know if you have any questions.

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
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5275 Leesburg Pike
Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
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[EXTERNAL] RE: ZooTampa

Joseph Gaspard <jgaspard@pittsburghzoo.org>

Fri 3/8/2019 11:08 AM

To: Barry, Anna <anna_barry@fws.gov>; Doug.Warmolts@columbuszoo.org <Doug.Warmolts@columbuszoo.org>
Cc: Cogliano, Mary <mary_cogliano@fws.gov>; Scruggs, Pamela <pamela_scruggs@fws.gov>; Calleson, Teresa <teresa_calleson@fws.gov>; Herrington, Jay <jay_herrington@fws.gov>

Hello Anna,

We held a call this morning with the Co-Chairs of MRP's Rescue and Rehabilitation Committee and the MRP recommends the following four manatees for placement at ZooTampa –

Tm-1834: This is a conditionally non-releasable animal.

Tm-1857: This was a challenging refractory pneumothorax case that had a chest tube placed. There was some concern about a possible pleuritis and this animal is still under medical care with Dr. Erlacher-Reid.

Tm-1858: This was the calf that came in with Tm-1857. They have not been housed together in some time since arrival, but Tm-1858 is doing very well clinically and is not under medical care.

Tm-1861: This was a pneumothorax case that has resolved and is doing very well. Has not been handled since 12/14/18 and has not re-inflated. My understanding is that this manatee is medically cleared for release.

As they continue to progress, Tm-1857 and Tm-1861 would likely be considered candidates for release in the near future. All four of these manatees were rescued from the west coast of Florida.

Thank you,
Joe

Joseph Gaspard, Ph.D.
Director of Science and Conservation
Pittsburgh Zoo & PPG Aquarium
One Wild Place
Pittsburgh, PA 15206-1178

jgaspard@pittsburghzoo.org
Office - 412-365-2642
Fax - 412-365-2583



From: Barry, Anna [mailto:anna_barry@fws.gov]
Sent: Thursday, March 07, 2019 5:56 PM

To: Joseph Gaspard <jgaspard@pittsburghzoo.org>; Doug.Warmolts@columbuszoo.org
Cc: Mary Cogliano <mary_cogliano@fws.gov>; Scruggs, Pamela <pamela_scruggs@fws.gov>; Terri Calleson <Teresa_Calleson@fws.gov>; Jay Herrington <jay_herrington@fws.gov>
Subject: ZooTampa

Dear Mr. Gaspard and Mr. Warmolts,

Please see the attached letter concerning authorization for ZooTampa to receive and maintain manatees under the Manatee Rescue and Rehabilitation Program. We understand that you have been working with our North Florida Ecological Services Office to recommend specific manatees to be transferred to ZooTampa. We request that by noon tomorrow you provide us with the identification of those manatees you recommend to be transferred to ZooTampa. We will respond with our final decision on those transfers by COB tomorrow.

Sincerely

Anna Barry
Supervisory Policy Specialist
USFWS/Division of Management Authority
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Falls Church, VA 22041-3803
1-800-358-2104, ext. 1976 or 703-358-1976
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December 20, 2018

Dear Jim and Terri,

On behalf of the Manatee Rescue & Rehabilitation Partnership (MRP), please accept this letter as the MRP's current position on transporting manatees to ZooTampa.

First, we would like to reiterate our commitment to working progressively with the United States Fish and Wildlife Service (USFWS) on the conservation of West Indian manatees, in particular the Florida manatee. The MRP serves in an advisory role to the USFWS who holds the legal authority to determine which facilities are authorized, currently through Letters of Authorization under a permit issued to the USFWS Jacksonville Field Office (JFO), to verify, rescue, transport, hold, and act in a critical care capacity.

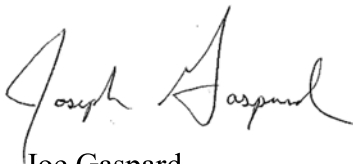
On October 22, 2018, a letter was sent by USFWS Division of Management Authority (DMA) to ZooTampa at Lowry Park, a manatee critical care facility and MRP Partner, noting allegations of concerning activities by their lead veterinarian, Dr. Ray Ball, requiring a response by ZooTampa to specific questions on or before December 7, 2018. At the time the letter was delivered, ZooTampa was not holding any manatees due to previously scheduled facilities maintenance. Due to the nature of the allegations, the fact that there was not an urgent need, and out of an abundance of caution, the MRP made the recommendation to USFWS to delay a previously scheduled transport of manatees to ZooTampa from another critical care facility, which was supported by USFWS. Through several conference calls, the MRP Chairs were briefed by the USFWS on the contents of the original DMA letter to ZooTampa regarding the allegations against Dr. Ray Ball. Due to confidentiality by USFWS, no further details were provided. It was conveyed that the letter from DMA to ZooTampa did not include the totality of the allegations. It is the MRP's understanding that ZooTampa conducted an internal review by three experienced manatee veterinarians and Mr. James Gesualdi, publically releasing their response letter to DMA on December 11, 2018.

At this time, the MRP has only had access to the original letter from DMA to ZooTampa through the USFWS FOIA Reading Room, the response letter from ZooTampa that was released to the general public, and has no knowledge of the allegations or additional information beyond those detailed in these letters.

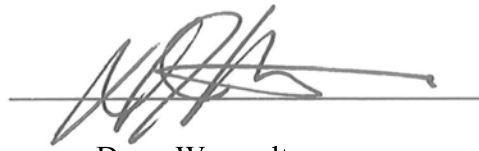
Therefore, without a more comprehensive understanding of the allegations, their status of resolution as determined by USFWS, further details of the review, and the current standing of ZooTampa's LOA, the MRP Steering Committee is unable to make a recommendation to move manatees to ZooTampa at this time. If the USFWS JFO and DMA make a determination that the allegations against ZooTampa have been sufficiently resolved and authorize that they may receive manatees, the MRP Steering Committee can reconvene to discuss and make a recommendation.

The MRP holds all of its Partners in high regard and looks to continue working cooperatively to advance the conservation of manatees.

Best regards,



Joe Gaspard
MRP Co-Chair



Doug Warmolts
MRP Past Chair

Cc: Jim Valade
Teresa Calleson
Mary Cogliano
Anna Berry
MRP Steering Committee



United States Department of the Interior



FISH AND WILDLIFE SERVICE
International Affairs
5275 Leesburg Pike, MS: IA
Falls Church, VA 22041-3803

October 15, 2018

Mr. Joe Couceiro
Lowry Park Zoological Society of Tampa
1101 West Sligh Avenue
Tampa, Florida 33604

Dear Mr. Couceiro:

This letter responds to your request to renew your authorization under the Marine Mammal Protection Act (MMPA) [16 U.S.C. sections 1379(h), 1382 (c) and under the U.S. Endangered Species Act (ESA) section 10(a)(1)(A) to rescue, rehabilitate, release, and post-release monitor the West Indian manatees (*Trichechus manatus*), including the subspecies, *T.m. latirostris*, and *T.m. manatus*. The goal of the Rehabilitation Program is to rescue and rehabilitate injured and distressed manatees and release them back into the wild when medically feasible.

We have received information concerning the alleged activities of your lead veterinarian, Dr. Ray Ball, involving the treatment of manatees under his care. According to information received by the U.S. Fish and Wildlife Service (Service), Dr. Ball purportedly released an underweight manatee with open wounds and performed field amputations resulting in the bone of the animal protruding. If these allegations are true, these activities are not consistent with the "Guidelines for Release of Rehabilitated West Indian Manatees." According to your Letter of Authorization (LOA), Part III, Section D(3) under "Special Conditions for Critical Care and Rehabilitation/Holding Facilities," facilities are to "Treat injured and distressed manatees in a manner consistent with best medical treatment and practice methods and based on advice from a qualified manatee veterinarian." Therefore In accordance with Part III, Section D(9) of the LOA, Dr. Ball must cease all activities with manatees; please inform us who will be your acting lead veterinarian until this issued is resolved. In view of the credible reports raising significant questions as to whether the activities of Dr. Ball comply with the terms and conditions of the permit, the Service is seeking additional information from the facility as to whether the reported activities are consistent with the authorization in order to determine whether it should be renewed.

1. **Pneumothorax** – After chest taps were performed by Dr. Ball, on more than one occasion (manatees #102929 and #103118), the animals died, and the necropsy reports showed perforations in the lungs from the chest taps.

Question – Why did Dr. Ball continue performing chest taps when the necropsy report on one animal determined that the cause of death could have been related to perforations in the lungs as a result of the chest tap? Did Dr. Ball discuss this procedure with other specialists, such as those

from the North Florida Ecological Services Office, the USDA, and/or other specialists participating in the Manatee Rehabilitation Partnership meetings? If yes, with whom did Dr. Ball consult, what was the approximate date of the discussion(s), and what was the content and outcome of the discussion(s)?

2. Field Amputation – On more than one occasion, Dr. Ball performed in-field amputations of manatees' flipper, at times without treatment for infection and pain and at times releasing the manatees with exposed bones (manatees' #RNW1719 and #RNW1505).

Question – Why did Dr. Ball believe these animals were releasable under Part B of the "Guidelines for Release of Rehabilitated West Indian Manatees," entitled "Overview of Release Categories for Manatees?"

3. Drugs – On more than one occasion, experimental drugs and/or experimental-methods of administering drugs were used. Heparin therapy was administered to manatee #103357 beginning October 2016 and Dr. Ball allegedly administered "drug combinations" on manatee(s) that were considered physically compromised and for which he did not have or did not use equipment needed for the procedure; (manatee #HS8601).

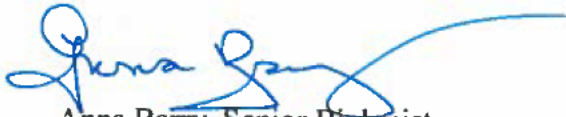
Question – Pursuant to Part III (14) of the LOA's "Special Conditions for Critical Care and Rehabilitation/Holding Facilities," was the Service consulted prior to the above activities?

4. Hay – The use of feeding hay to young/growing manatees or animals that are physically compromised.

Questions – Please explain if and why you fed hay to such manatees in the categories as noted above.

Please provide the requested information by November 30, 2018, to avoid your request for renewal of your authorization from being abandoned and administratively closed. Once a file is closed you will need to submit a new application for the Service to consider your proposed activity.

Sincerely,



Anna Barry, Senior Biologist
Branch of Permits
Division of Management Authority