

2004 IAAAM Scientific Program

Abstracts marked ☺ are by students.
The presenter's name is marked with a *.

MONDAY APRIL 5, 2004

8:00 AM

INTRODUCTIONS

8:30 AM – 10:15 AM

AQUATIC ANIMAL HEALTH AND THE MARINE ENVIRONMENT IN COASTAL TEXAS

PLENARY SESSION

Session Chair: Dan Cowan

Habitat Restoration in Galveston Bay

*Jarrett Woodrow**

Birds, Sea Turtles, and Marine Mammals Stranded Along a Section of the South Texas Coast: A 20-Year Data Set

*Anthony Amos**

Pesticides and the Environment: The Story of the Brown Pelican

*Alice Anne O'Donell **

Necropsy of Sea Turtle Carcasses Found Stranded on the Upper Texas Coast, January 1, 1995 through December 31, 2001

Clark T. Fontaine and Dickie B. Revera*

Development of an Integrated, Offshore Hatchery and Cage Culture System in the Gulf of Mexico.

Phillip G. Lee and John Ericsson*

Changes in Patterns of Disease in Dolphins Stranding Along the Texas Gulf Coast: Angiomatosis and Meningitis

*Daniel Cowan**

Monday April 5

10:30 AM – 12:30 PM

FISH SESSION I

Session Chair: Roy Yanong

Preliminary Investigations with Pyceze ® (Novartis Animal Vaccines Limited) in Select Species of Freshwater Tropical Fish

*Roy P. E. Yanong, * Chris Daniels, Richard Hunter*

Development of Non-lethal Testing Methods for Largemouth Bass Virus

Robert S. Bakal, Thomas Vaughn, and H. Edward Hohlt*

A Pelleted Feed for the High-Volume Production of Largemouth Bass Fingerlings Free of Pale Liver Syndrome

Paul Cardeilhac, Heather Dickson☺, Rick Stout, Scott Hardin*

A Model Interagency Approach to Fish Health: A Unique Collaboration of Federal, State, University and Private Entities

Kathleen H. Hartman, Otis Miller, Roy P.E. Yanong, B. Denise Petty, Ruth Francis-Floyd*

Relationships of Koi Herpesvirus (KHV) to Herpes-like Viruses of Fish and Amphibians

Thomas B. Waltzek, Garry O. Kelley, Susan C. Yun, Terry S. McDowell, Ron P. Hedrick

The Use of an Upflow Refugium and Phytoremedial Device for Water Purification in Clinical Pet Fish Practice

*Julius M. Tepper**

Mycobacteriosis in Striped Bass Populations from Mid-Atlantic Waters: A Cooperative Research Project

*Christopher A. Ottinger, Christine L. Densmore**

Koi Health Advisor Program of the AKCA--Update

Sandra Yosha, Tim Miller-Morgan**

Monday April 5

2:00 PM – 3:00 PM

FISH SESSION II

Session Chair: Roy Yanong

Intestinal Cryptosporidiosis in Knysna Seahorse (*Hippocampus capensis*)

Drury R. Reavill, Michael J. Murray, Jon Hoech*

Salmon Farming Politics and the Fish Health Professional

*Hugh Mitchell**

Characterization of a Chlamydia-like Bacterium Associated with Epitheliocystis in Farmed Atlantic Salmon (*Salmo salar*) by Antigenic Reactivity, 16S Ribosomal RNA Gene Sequence Identity, and Molecular Phylogenetic Inference

Salvatore Frasca Jr., Andrew Draghi II, Vsevolod L. Popov, Melissa M. Kahl, James B. Stanton, Corrie C. Brown, Gregory J. Tsongalis, A. Brian West*

Medical Management of Syngnathids with Buoyancy Disorders

*Shirley Yeo Llizo**

Monday April 5
3:15 PM – 5:15 PM
CASE REPORTS
Session Chair: Natalie Noll

Cryptococcosis Due To *Cryptococcus neoformans gatti* In Stranded Harbor (*Phocoena phocoena*) And Dall's Porpoises (*Phocoenoides dalli*) In British Columbia And Washington State
*Stephen Raverty**.

Pathologic And Clinical Implications Of *Streptococcus phocae* Isolated From Pinnipeds Along Coastal Washington State, British Columbia And Arctic Canada
*Stephen Raverty**

Diagnostic Approach To Dementia And Seizures In A Juvenile Northern Sea Otter (*Enhydra lutris*)
*Natalie Noll **

Clinical Manifestations And Treatment Of Discospondylitis In An Adult Captive Harbor Seal
*Pam Tuomi**

Suspected Doxycycline Phototoxicity In A Pacific White-Sided Dolphin (*Lagenorhynchus obliquidens*)
*David Huff**

Fungal Dermatitis In A Yellow-Bellied Sea Snake (*Pelamis platurus*)
*Drury Reavill**

Treatment And Management Of Severe Bilateral Uveitis, Glaucoma, And Corneal Oedema Following Systemic Melioidosis In A *Zalophus californianus*
*Derek Speilman**

Tuesday April 6
8:00 AM – 10:15 AM
INNOVATIVE AND NOVEL TECHNIQUES
Session Chair: Tonya Clauss

Measurements Of Common Iliac Arterial Blood Flow In Bullfrogs (*Rana catesbeiana*) And Marine Toads (*Bufo marinus*) Using Doppler Ultrasound
Scott Willens☺*, *Sloan H. Dupree*, *Michael K. Stoskopf*, *Gregory A. Lewbart*, *Suzanne Kennedy-Stoskopf* and *Sharon K. Taylor*

Use Of Two-Compartment Teflon Flow-Through Diffusion Cells To Study Cutaneous Absorption Kinetics Of Malathion In The Bullfrog (*Rana catesbeiana*) And Marine Toad (*Bufo marinus*)
Scott Willens☺*, *Michael K. Stoskopf*, *Ronald E. Baynes*, *Gregory A. Lewbart*, *Suzanne Kennedy Stoskopf* and *Sharon K. Taylor*

High Hydrostatic Pressure Significantly Inhibits The Rise In Northern Elephant Seal Platelet Calcium: A Comparative Study With Human Platelets
Cara L. Field☺*, *John H. Crowe*, and *Fern Tablin*

Medulla Aplasia Due To Hyperoestrogenism Resulting In Chronic Anemia In A Grey Seal (*Halichoerus grypus*)

Géraldine Lacave *, Ana Salbany, Luis Roque and Samuel R. Dover

Laparoscopic Ovariectomy In A Grey Seal (*Halichoerus grypus*) For Treatment Of Hyperestrogenism

Samuel R. Dover*, Geraldine Lacave, Ana Salbany and Luis Roque

Bandaging And Splinting Techniques In Marine Animals

Michael T. Walsh*, Elizabeth Chittick, Scott Gearhart

Development Of A Digital Reference Atlas of *Tursiops truncatus* Diagnostic Imaging

Marina Ivancic©*, Bill Van Bonn

Medical Record Keeping In A Public Aquarium: Adapting A Commercially Available Software Application To A Custom Situation

Timothy J. Mullican*

Tuesday, April 6

10:45 AM – 12:30 PM

REPRODUCTION

Session Chair: Reimi Kinoshita

The Use Of Vaginal Cytology In The Bottlenose Dolphin (*Tursiops truncatus*) To Monitor The Estrous Cycle

Holley Muraco*, Mike Muraco, Dan Blasko, Lanny Cornell, Dennis Arn, and Mike Simon

Qualitative Analysis Of A Luteinizing Hormone (LH) Assay In The Bottlenose Dolphin (*Tursiops truncatus*)

Mike Muraco*, Holley Muraco, Dan Blasko, Lanny Cornell, Dennis Arn, and Mike Simon

Ultrasonographic Assessment Of The Ovarian Cycle In The Indo-Pacific Bottlenose Dolphin (*Tursiops aduncus*) At Ocean Park, Hong Kong And Its Use In Controlled Natural Breeding And Artificial Insemination: Twelve Years On

Fiona M. Brook* and Reimi E. Kinoshita

Ultrasonographic Assessment Of The Reproductive Cycle Of The Indo-Pacific Humpback Dolphin, *Sousa chinensis*

Fiona Brook, Evan H.T. Lim*, Frederic H.C. Chua, and Bruce Mackay

Assessment Of Testicular Growth And Sexual Maturity In The Indo-Pacific Bottlenose Dolphin (*Tursiops aduncus*)

Queeny Yuen©*, Fiona M. Brook, and Reimi E. Kinoshita

Artificial Insemination In The Indo-Pacific Bottlenose Dolphin (*Tursiops aduncus*)

Reimi Kinoshita*, Derek Spielman, Nathalie Mauroo, Natalie Rourke, Crista Rayner, and Fiona Brook

Retained Fetus In A Pacific Walrus (*Odobenus rosmarus divergens*)

Leslie M. Dalton*, W. Sherman Mathey and Dudley Wigdahl

Tuesday April 6
2:00 PM – 3:30 PM
STRANDING AND REHABILITATION
Session Chair: Lisa Mazzaro

In Vitro Metal Toxicity In Steller Sea Lion (*Eumetopias jubatus*) Fibroblasts With An Emphasis On Hexavalent Chromium

*Caroline E. C. Goertz ☺**, *Sandra S. Wise*, *John P. Wise Sr.*, *Mary Bozza*, *Shannon Atkinson*, *Frances M.D. Gulland* and *J. Lawrence Dunn*

Sea Turtle Strandings And Mortality On The Central West Coast Of Florida, 1993-2003

*Deborah Fauquier**, *Jerris Foote*, *James Grimes*, *Tracey Mueller*, *Gretchen Hurst*, *Howard Rhinehart*, and *Charles Manire*

A Review Of Animal and Human Health Concerns During Capture-Release, Handling And Tagging Of Free-Ranging Odontocetes

*Stephanie A. Norman**, *Roderick C. Hobbs*, *Jeff Foster*, *J. Pete Schroeder* and *Forrest I. Townsend*

Utilizing Expanded Diagnostics In Pinniped Rehabilitation

*Judy St. Leger**, *Tom Reidarson*, *Todd Schmitt* and *James McBain*

Development Of A Prognostic Index For Stranded Harp And Hooded Seals

*Lisa Mazzaro**, *J. Lawrence Dunn*, *Robert DiGiovanni*, *Kim Durham*, *Keith Matassa*, and *Edmund Kadyszewski*

Tuesday April 6
4:00 PM – 5:30 PM
MANATEE SESSION
Session Chair: Deborah Fauquier

A Serologic Survey of Florida Manatees (*Trichechus manatus latirostris*) For West Nile Virus And Development Of A Competitive Inhibition ELISA

*Martha Keller☺**, *Maureen T. Long*, *Ruth Francis-Floyd*, and *Ramiro Isaza*

The In Vitro Effects of Simulated Cold Stress Syndrome On The Gut Microflora Of The Florida Manatee, *Trichechus manatus latirostris*

*Heather A. Lynch☺**, *Vivek Fellner*, *Sentiel A. Rommel*, and *John Reynolds III*

Comparison Of Methods To Diagnose Inflammatory Disease In Manatees (*Trichechus manatus latirostris*)

*Kendal E. Harr☺**, *John W. Harvey*, and *Ruth Francis Floyd*

Urinalysis And Urine Chemistries In The Florida Manatee, *Trichechus manatus latirostris*, Under Differing Diet And Salinity Conditions

*Charles A. Manire**, *Michael S. Renner*, and *Thomas H. Reidarson*

Watercraft-Related Wounds In Florida Manatees: Consequences For The Individual Animal

*Jessica D. Lightsey**, *Sentiel A. Rommel*, and *Thomas D. Pitchford*

6:30 – 8:30
POSTERS
Session Chair: Chris Dold

Stranding Causes Of Northern Elephant Seals (*Mirounga angustirostris*) And Pacific Harbor Seals (*Phoca vitulina*) Along The Central California Coast: 1992-2001
Kathleen M. Colegrove☺*, and *Frances M.D. Gulland*

Analysis Of Stellar Sea Lion IgG And IgM Levels Across The Geographic Range Of The Population
Jennifer A. Colvocoresses☺*, *Bobby L. Middlebrooks*, and *Rhonda A. Patterson*

Cnidarian Cell Culture: Development Of A Laboratory Tool For Coral Disease Research
*Christine Densmore** and *Phil McAllister*

Histological Examination Of Florida Manatee Integument
Anne-Renee Graham☺*, *Don Samuelson*, *Rosanna Marsella*, *Patricia Lewis*, *Roger Reep*, and *Elsa Haubold*

Physical Therapy's Role In Dolphin Rehabilitation: A Case Report
*Julie A. Hobbs**, *Darin W. Trees*, *Tamara Renaud*, and *Celeste Weimer*

Monitoring Hormones And Behavior In Female Florida Manatees (*Trichechus manatus latirostris*)
Iske L.V. Larkin☺*, *Jessica Warnke*, *Roger L. Reep*, *Tim S. Gross*, *Chifuyu Horikoshi* and *Bruce A. Schulte*

Preliminary Investigation Into The Presence Of Plasmid DNA In Various Isolates Of *Erysipelothrix rhusiopathiae*
Audrey Mareska☺* and *John C. Jones*

A Bottlenose Dolphin (*Tursiops truncatus*) Ovulation Defined By Progesterone, Estrogen, And Luteinizing Hormone (LH) Assays, Vaginal Cytology, And Behavioral Assessments
*Holley Muraco**, *Mike Muraco*, *Dan Blasko*, *Lanny Cornell*, *Dennis Arn*, and *Mike Simon*

A Novel Herpesvirus Associated With Necrotizing Keratitis In The California Sea Lion
Hendrik Nollens☺*, *Elliott Jacobson*, *Deke Beusse*, *Frances Gulland*, *Martin Haulena*, and *Richard Condit*

Comparison Of Hormone Levels And Leukocyte Ranges From Wild Population and Rehabilitated Harbor Seal Pups (*Phoca vitulina*)
Danielle R. O'Neil☺* and *Shannon Atkinson*

Hemorrhagic Enteritis Associated With *Clostridium difficile* Toxin A And Toxin B In Harbor Seals (*Phoca vitulina*) In Washington State And British Columbia
*Stephen Raverty**, *Kim Carlsen*, *Erin Whitton*, and *Sean Byrne*

Detection Of *Brucella* spp. Antibodies In Post Mortem Heart Blood And Antemortem Serum Of Killer Whales (*Orcinus orca*) In The Pacific Northwest

Stephen A. Raverty, Klaus Nielsen, Ole Nielsen, Brad Hanson, and Joseph K. Gaydos

A Searchable Database Of Residues And Pharmacokinetics Data In Fish – FDA-Phish Pharm.

Renate Reimschuessel, Leslie Stewart, Keiko Hirokawa, Elizabeth Squibb, Tiffany Brady, Deborah Brooks, Badaruddin Shaikh, Clifford Hodson

Reconditioning “Emma”: A Case Report Of The Use Of Therapy To Help A Dolphin Regain Strength And Endurance

Tammy Renaud and Julie Hobbs*

Holistic Approach To Cetacean Rehabilitation

Keith R. Poster and Tammy Renaud*

An Investigation Of The Cross Reactivity Of Antibodies Against The Immunoglobulins Of Several Mammalian Species With The Immunoglobulins Of The Harbor Seal, *Phoca vitulina*

Jennifer G. Woodford©, Bobby L. Middlebrooks, and Rhonda A. Patterson*

Wednesday April 7

8:30 AM – 10:00 AM

PHARMACOLOGY AND THERAPEUTICS

Session Chair: Tracey Goldstein

Bioencapsulation Of Metronidazole In Adult Brine Shrimp

A. Jeanene McCoy, Janell M. Crowder, John Dickson, Allison L. Corwin, M. Andrew Stamper, and Rolando Perez*

A Pharmacokinetic Study Of Enrofloxacin In The European Cuttlefish (*Sepia officinalis*) After A Single Intravenous Injection And Bath Administration

Stacey R. Gore©, Mark G. Papich, Gregory A. Lewbart, Butch Kukanich, Craig A. Harms, and John Forsythe*

Side Effects Of Haloperidol (HALDOL®) To Treat Chronic Regurgitation In California Sea Lions

Thomas H. Reidarson, Jim McBain, and Judy St. Leger*

Antibiotic Susceptibility Testing Of *Erysipelothrix rhusiopathiae* Isolates Implicated In The Deaths of Captive Cetaceans

*John C. Jones**

Dietary Related Fluctuations In Plasma Calcium: Phosphorus Ratios In Kemp’s Ridley Sea Turtles (*Lepidochelys kemp*)

Tonya Clauss, Charles Manire, and Lynne Byrd*

Thursday April 8
8:00 AM – 10:00 AM
IMMUNOLOGY AND PATHOLOGY I
Session Chair: Tanja S. Zabka

Fundamental And Applied Oyster Immunology
*Michael Goedken, Brenda Morsey, and Sylvain De Guise**

Necropsy Procedures For The Common Cuttlefish (*Sepia officinalis*)
*Joseph M. Scimeca**

Characterization Of Immunoglobulin G (IgG) In The Spectacled Eider (*Somateria fischeri*)
Jill M. Frank ☺ Bobby L. Middlebrooks, and Rhonda A. Patterson*

IgG And IgA Concentrations Determined In Serum And Milk Samples From Atlantic Bottlenose Dolphins (*Tursiops truncatus*) With Monoclonal Antibodies Specific For The Individual Immunoglobulin Isotypes
Rhonda A. Patterson, Nicole A. Lilly, and Bobby L. Middlebrooks*

Molecular Cloning Of Harbor Seal Interleukin-1 beta (IL-1 β) From A LPS-Stimulated Mononuclear Cell cDNA Library
Mary Bozza and Shannon Atkinson*

Diversity Of Immune Response (Major Histocompatibility Complex, MHC) Genes In Free-Ranging Pinnipeds
Jeffrey Stott, Brian Aldridge, Elizabeth Bowen, Michael Johnson, Linda Lowenstine, Frances Gulland, Robert DeLong, Sharon Melin, William Van Bonn, Thomas Gelatt, George Antonelis, Kimberlee Beckmen, and Kathy Burek*

Mechanisms For Modulation Of Phagocytosis By Organochlorines In Atlantic Bottlenose Dolphins And Beluga Whales
Milton Jay Levin,☺ Brenda Morsey, Chiharu Mori, and Sylvain De Guise*

Thursday April 8
10:30 AM – 11:45 AM
IMMUNOLOGY AND PATHOLOGY II
Session Chair: Tanja Zabka

Use Of A Dolphin *Brucella* Isolate In An Indirect Enzyme-Linked Immunosorbant Assay And Comparison With Other Current Serologic Tests For The Detection Of Antibodies To *Brucella* Species In Bottlenose Dolphins
Jenny Meegan,☺ Stephanie Wong, Eric Jensen, Cynthia Smith, and William Van Bonn, Barbara Byrne, Garry Adams, Roberta Pugh, and Tracy Romano*

A Combinatorial Approach For The Detection Of *Brucella maris* From Clinical Samples Using RT-PCR And Comparative Serology
Kerrie McArthur-Vaughan,☺ Jason Del Crew, Cynthia R. Smith, Eric D. Jensen, Tracy A. Romano, and William G. Van Bonn*

The Development Of A Novel DNA Vaccine Formulation Against *Brucella maris*
Kerrie McArthur-Vaughan ☺* and *William G. Van Bonn*

A DNA Vaccine Against Dolphin Morbillivirus Is Immunogenic In Atlantic Bottlenose Dolphins
(*Tursiops truncatus*)

Kerrie McArthur-Vaughan ☺* *Jason Del Crew, Cynthia R. Smith, William G. Van Bonn, Gary Hermanson, Mary K. Wloch, and Tracey Schock*

Thursday April 8

1:00 PM – 3:00 PM

INFECTIOUS AND PARASITIC DISEASE

Session Chair: Hendrik Nollens

A Serosurvey For West Nile Virus At Seaworld San Antonio, San Antonio, TX
Leslie M. Dalton,* *Sherry Dickerson* and *Dudley Wigdahl*

Eastern Equine Encephalitis Infection In A Flock of African Penguins (*Spheniscus demersus*)
Allison D. Tuttle ☺*, *J. Lawrence Dunn, Theodore G. Andreadis and Salvatore Frasca*

Lymphoid Follicular Cloacal Inflammation In Juvenile Alligators (*Alligator mississippiensis*)
Pamela D. Govett, ☺* *Craig A. Harms, April Johnson, L. Shane Christian and Gregory A. Lewbart*

Poxvirus Infections In North American Pinnipeds

Hendrik H. Nollens ☺* *Elliott R. Jacobson, Frances M.D. Gulland, Martin Haulena, Diedrich O. Beusse, Gregory D. Bossart and Richard C. Condit*

Otostrongylus circumlitus Infestation And Disseminated Adenovirus Infection In A Stranded California Sea Lion (*Zalophus californianus*)

Kathleen M. Colegrove ☺* *Elizabeth L. Buckles, Linda J. Lowenstine, Terra Kelly, Murry D. Dailey, Martin Haulena and Frances M. D. Gulland*

Persistent Penile Lesions In An Atlantic Bottlenose Dolphin (*Tursiops truncatus*) Associated with Genomic Sequences of Herpes and Papilloma Viruses

Michael S. Renner,* *Kara A. Smolarek and Carlos H. Romero*

Infection In Two Harbor Seals (*Phoca vitulina*) With West Nile Virus

*Edward J. Gentz** and *Michael J. Richard*