CURRICULUM VITAE

Randall William Davis

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EDUCATION

- 1980 Ph.D. in Physiology, University of California, San Diego, California
- 1975 Department of Physiology, University of St. Andrews, St. Andrews, Scotland
- 1974 B.S. in Biology, High Honors, University of California, Riverside, California, Phi Beta Kappa Honor Society

CAREER APPOINTMENTS

2012 2011 2007 1994- 1990-97 1990-94	Fulbright Fellow, University of Mar del Plata, Argentina Regents Professor, Texas A&M University Visiting Professor, Ocean Research Institute, University of Tokyo Professor, Department of Marine Biology, Texas A&M University Head, Department of Marine Biology, Texas A&M University Associate Professor, Department of Marine Biology, Texas A&M
1990-	University Director, Laboratory for Aquatic Animal Performance and Physiology,
	Texas A&M University
1990	Research Physiologist, University of California, San Diego, CA
1989-90	Director of the Exxon Valdez Oil Spill Response for Sea Otters
1983-89	Research Physiologist, Hubbs Marine Research Institute, San Diego, CA
1987-89	Research Associate in Marine Sciences, University of San Diego
1985-89	Adjunct Professor, California State University, San Diego
1984-90	Visiting Scholar, University of California, San Diego
1981-84	Postgraduate Research Physiologist and NIH Postdoctoral Fellow,
	Physiological Research Laboratory, Scripps Institution of Oceanography, La Jolla, CA
1975-80	Research Assistant, Physiology/Pharmacology Group, School of Medicine, Univ. of California, San Diego, CA

PROFESSIONAL AND HONORARY SOCIETIES

American Physiological Society Society for Marine Mammalogy Phi Beta Kappa Society Explorers Club Society for Experimental Biology

HONORS AND AWARDS

2012 2012	Fulbright Fellowship Smithsonian speaker
2012 2011	Journal of Comparative Physiology A. Top 10 downloaded papers Regents Professor, Texas A&M University
2008	First place in the Jack Ward Competition for Non-Commercial Films presented to Jesse E. Purdy and Randall W. Davis, Co-Producers of: " <i>The</i> <i>World of Weddell Seals</i> ." The 45 th Animal Behavior Society Annual Meeting, Snowbird, Utah
2008	Christine Stevens Wildlife Award for innovations in non-invasive research methods for wildlife (\$10,000)
2007	USGS Antarctic Site Designation, Davis Bluff on White Island, Antarctica in honor of research on Weddell seals from 1977-2003, including the winter of 1981
2005	Comparative Physiology and Biochemistry: Molecular & Integrative Physiology. Top 10 downloaded papers
1998-2000	Secretary for the Society for Marine Mammalogy
1993	Society for Marine Mammalogy, Conference Research Chair
1990	Distinguished Service Award for the Exxon Valdez Oil Spill Response for Sea Otters
1981-84	NIH Postdoctoral Fellow
1977, 1981	Antarctic Service Medal with Winter Ribbon
1974	Inducted into the Phi Beta Kappa Honor Society

PATENTS

U.S. Patent 5315965; May 1994; Aquatic fur-bearing mammal and bird vivarium (https://www.google.com/patents/US5315965)

COURSES TAUGHT

1990-2018 Texas A&M University at Galveston

- 1. Comparative Physiology (Upper division undergraduate course)
- 2. *Physiological Ecology of Marine Mammals* (Upper division undergraduate course)

- 3. Coastal Marine Biology of Alaska (Upper division undergraduate course)
- 4. *Marine Science of the Pacific Rim* (Upper division undergraduate course)
- 5. Developmental Biology (Upper division undergraduate course)
- 6. Marine Biology Seminar Series (Upper division undergraduate course)
- 7. *Marine Mammalogy* (Team taught graduate course)
- 1994-2018 Alyeska Pipeline Service Company
 - 1. Care and rehabilitation of oiled sea otters
 - 2. Capture and care of oiled sea otters
- 1977-88 Scripps Institution of Oceanography and the University of California, San Diego
 - 1. Physiology, swimming performance and diving behavior of marine mammals. (Lecture Series)
 - 2. Biochemical and physiological adaptations in marine mammals. (Lecture Series)
 - 3. Graduate course on marine mammal physiology and metabolism. (Team taught course)
 - 4. Organ physiology and pharmacology laboratories for first year medical class. (Team taught course)
- 1979 Docents lecturer on marine mammals for Natural History Museum, San Diego, CA.
- 1977 Respiratory physiology course, Balboa Naval Hospital, San Diego, CA. (Lecture Series)

FIELD RESEARCH EXPERIENCE

Ninety-four (94) field studies conducted on six continents during the past 42 years.

2014-17 2015-17 2015 2014	Geomagnetic navigation by Weddell seals beneath Antarctic ice Behavioral ecology of leatherback sea turtles in St. Croix, US Virgin Is. Three-dimensional movements of tiger sharks in Western Australia Foraging behavior of basking sharks off Cape Code
2013-14	Three-dimensional movements of grey reef sharks in Palau
2013	Hunting behavior and foraging ecology of southern fur seals in Uruguay
2011-15	Hunting behavior and foraging ecology of southern elephant seals
2010,12	Behavioral ecology of sperm whales and giant squid near the Ogasawara (Bonin) Islands, Japan
2010	Behavioral ecology of sperm whales and their jumbo squid prey in the Gulf of California
2010-12	Hunting behavior and foraging ecology of southern sea lions in Uruguay
2010	Hunting behavior and foraging ecology of sperm Whales in the Gulf of California, Mexico

2008-2010	Hunting in darkness: Behavioral and energetic strategies of Weddell seals in winter
2008-11,15	Behavioral ecology of whale sharks along the Ningaloo Reef in Northwestern Australia (3 field seasons)
2008	Hunting behavior and foraging ecology of northern elephant seals
2007	Winter movements, foraging behavior and habitat-associations of northern fur seal pups on the Commander Islands, Russia
2007	Seasonal movements and critical habitat of southern sea lions in Uruguay
2006	Hunting behavior and foraging ecology of Antarctic fur seals on South Georgia Island
2004	Satellite tracking of sperm whales in the Gulf of California, Mexico: A method to study the ecology of a mesopelagic predator
2003-04	Seasonal movements and critical habitat of Steller sea lions in the Gulf of Alaska
2001-17	Ecology of sea otters in Alaska
1997- 02	Hunting behavior of Weddell seals, Antarctica
1999-00	Harbor seal recovery: Phase III: Effects of diet on lipid metabolism and health. Prince William Sound, AK.
1993-94	Distribution and seasonal movements of dugongs in Mozambique.
1990-97	Reproductive energetics and nutritional status of northern sea lions in Alaska: Lowrie Island, Chirikof Island and Marmot Island, AK.
1996	Observing the underwater behavior of elephant seals at sea by attaching a small video camera to their backs: Santa Cruz, CA.
1993-98	Foraging behavior and fisheries interactions of Cape fur seals in southern Africa and Namibia.
1992-98	Distribution and abundance of cetaceans in the north-central and western Gulf of Mexico
1991-93	Diving behavior and preferred foraging habitat of harbor seals and spotted seals: Prince William Sound and Pt. Lay, AK.
1989	Sea Otter Rehabilitation Program: 1989 Exxon Valdez Oil Spill, Valdez, AK.
1988	Sensory components of under-ice movement and hole finding behavior of Weddell seals: McMurdo Station, Antarctica.
1988	Conservation of Galapagos penguins and flightless cormorants: Determination of critical habitat: Galapagos Islands, Ecuador.
1986-87	Sea Otter Oil Spill Avoidance Study: Prince William Sound, Alaska and Morro Bay, CA.
1984	Bioenergetics of free-ranging Gentoo and Macaroni penguins on South Georgia Island: Joint National Geographic and British Antarctic Survey Expedition to South Georgia Island, South Atlantic.
1984 1981	Life under permanent ice: White Island and Koettlitz Glacier, Antarctica. Winter ecology and diving behavior of Weddell seals: White Island and McMurdo Station, Antarctica (over-winter project).

- 1979 Fur Seal and Penguin Study at South Georgia Island: Joint U.S. Antarctic Research Program and British Antarctic Survey to South Georgia Island, South Atlantic.
- 1977 Weddell Seal Study: U.S. Antarctic Research Program, McMurdo Station, Antarctica.
- 1977 South Georgia Fur Seal Study: Joint U.S. Antarctic Research Program and British Antarctic Survey on R/V *Hero* to South Georgia Island, South Atlantic.
- 1976 Northern Fur Seal Study: Pribilof Islands, AK.

ACADEMIC PUBLICATIONS

Thirty-three (33) first-author publications and 90 co-authored publications for a total of 123 peer-reviewed journal publications and book chapters.

- Eder EB, Muelbert MMC, Hindell MA, Campagna C, **Davis** RW, Rodríguez DH, Lewis MN (in press) Is there Consistency in the Foraging Strategies of Gestating Female Elephant Seals (Mirounga leonina) from Península Valdés, Patagonia?
- Castro E, Dassis M, De León C, Sauvidet A, Rodríguez E, **Davis RW**, Rodríguez DH, Díaz A (in review) Echocardiographic left ventricular structure and function in Southern Sea Lions (Otaria flavescens). Veterinary Radiology & Ultrasound
- Andrzejaczek S, Gleiss AC, McGovern KA, **Davis** RW, Pattiaratchi CB, Ferreira L, Meekan MG (in review) Interactions between a tiger shark predator and its sea turtle prey. <u>Biology Letters</u>
- Lee OA, Andrews R, Burkanov V, **Davis** RW (in review) Habitat associations and foraging search behavior of northern fur seal (*Callorhinus ursinus*) pups from Bering Island, Russia. <u>Marine Ecology Progress Series</u>
- Olivier PA, Andrews RD, Calkins DG, Burkanov VN, Farrell ER, **Davis** RW (in review) Classification of Steller sea lion (*Eumetopias jubatus*) dive types using 3-Dimensional movements and observations from animal-born video recordings. <u>Deep-sea Research</u>
- Belonovich OA, Grant WE, Mamaev EG, Burkanov VN, Swannack TM, **Davis** RW (in review) Killer whale (*Orcinus orca*) predation on northern fur seals (*Callorhinus ursinus*) on the Commander Islands: Observations and models of alternative hypotheses regarding killer whale diets. <u>Marine Mammal Science</u>
- Pearson LE, Gullett KC, **Davis** RW, Kanatous SB, Florant GL (in review) Enzyme activities in mammals adapted to extreme environments: hibernators, and divers versus terrestrial mammals. <u>Physiological Zoology</u>
- Davis IP, Dellapenna TM, Malle G, Gelwick FP, **Davis RW** (in review) Distribution, abundance and habitat associations of sea otters and their prey in Simpson Bay, Alaska. <u>Marine Ecology Progress Series</u>
- Timm-Davis LL, **Davis** RW, Marshall CD (2017) Durophagous biting in sea otters (*Enhydra lutris*) differs kinematically from raptorial biting of other marine mammals. <u>Journal of Experimental Biology</u> 220:4703-4710

- Jue T, Simond G, Wright TJ, Shih L, Chung Y, Sriram R, Kreutzer U, **Davis** RW (2017) Effect of fatty acid interaction on myoglobin oxygen affinity and triglyceride metabolism. Journal of Physiological Biochemistry 73:359-370
- Williams TM, Fuiman LA, **Davis** RW (2016) Locomotion and the cost of hunting in large, stealthy marine carnivores. Integrative and Comparative Biology 55:673–682
- Russell LR, Purdy JE, **Davis** RW (2016) Social context determines vocalization usage by Weddell seals during the breeding season. <u>Animal Behavior and Cognition</u>. 3:95-119
- Polasek LK, Frost C, David JHM, Meyer MA, **Davis** RW (2016) Myoglobin distribution in the locomotory muscles of Cape fur seals (*Arctocephalus pusillus pusillus*). <u>Aquatic Mammals</u> 42:421-427
- Cortez M, Wolt R, **Davis** RW (2016a) Development of an altricial mammal at sea I: Activity budgets of female sea otters and their pups in Simpson Bay, Alaska. Journal of Experimental Marine Biology and Ecology 481:71-80
- Cortez M, Wolt R, **Davis** RW (2016b) Development of an altricial mammal at sea II: Energy budgets of female sea otters and their pups in Simpson Bay, Alaska. Journal of Experimental Marine Biology and Ecology 481:81-91
- Williams TM, Fuiman L, Kendall T, Berry P, Richter B, Noren S, Shattock M, Farrell E, Stamper AM, **Davis** RW (2016) Exercise intensity and depth alter bradycardia in deep-sea diving marine mammals. <u>Nature Communications</u> DOI: 10.1038/ncomms7055
- Belonovich OA, Fomin SV, Burkanov VN, Andrews RD, **Davis** RW (2015) Foraging behavior of lactating northern fur seals *(Callorhinus ursinus)* in the Commander Islands, Russia. <u>Polar Biology</u> (DOI) 10.1007/s00300-015-1786-9
- Meekan MG, Fuiman L, **Davis** RW, Berger Y, Thums M (2015) Swimming strategy and body plan of the world's largest fish: implications for foraging efficiency and thermoregulation. <u>Frontiers of Science</u> doi: 10.3389/fmars.2015.00064
- Wright T, **Davis** RW (2015) Myoglobin oxygen affinity in aquatic and terrestrial birds and mammals. Journal of Experimental Biology 218:2180-2189
- Williams TM, Bengston P, Steller DL, Croll DA **Davis** RW (2015) The healthy heart: Lessons from nature's elite athletes. <u>The Physiologist</u> 30:349-357
- Wright T, **Davis** RW (2015) Myoglobin extraction from mammalian muscle tissue and oxygen affinity determination under physiological conditions. <u>Protein Expression</u> and Purification 107:50–55
- McInnes AS, Nunnally CC, Rowe G, **Davis** RW, Quigg A (2014) Undetected blooms in Prince William Sound: Using multiple techniques to elucidate the base of the summer food web. <u>Estuaries and Coasts</u> doi 10.1007/s12237-014-9924-0
- **Davis** RW, David JHM, Meÿer MA Sekiguchi K, Best PB, Rodríguez D, Dassis M (2014) Home Range and Diving Behaviour of Heaviside's Dolphins monitored by satellite on the West Coast of South Africa. <u>African Journal of Marine Science</u> 36:455-466
- McGovern KA, Marshall CD, **Davis** RW (2015) Are vibrissae viable sensory structures for prey capture in northern elephant seals, *Mirounga angustirostris*? <u>Anatomical</u> <u>Record</u> 298:750-760

- Wolt RC, Finerty SE, **Davis** RW (2014) Time and energy allocation of female sea otters (*Enhydra lutris*) with pups in Alaska. Journal of Experimental Marine Biology and Ecology 461:93–101
- Lee OA, Andrews R, Burkanov V, F, **Davis** RW (2014) Ontogeny of early diving and foraging behavior of northern fur seal (*Callorhinus ursinus*) pups from Bering Island, Russia. <u>Marine Biology</u> 61:1165–1178
- Madden KM, Fuiman LA, Williams TM, **Davis** RW (2014) Weddell seal foraging dives: Comparison of free-ranging and isolated-hole paradigms. <u>Antarctic Science</u> doi:10.1017/S0954102014000297
- Dassis M, Rodríguez DH, Ieno E, Denuncio PE, Loureiro J, **Davis** RW (2014) Resting metabolic rate and heat increment of feeding in juvenile South American fur seals (*Arctocephalus australis*). <u>Comparative Biochemistry and Physiology A</u> 168 63-68
- **Davis** RW (2014) A review of the multi-level adaptations for maximizing aerobic dive duration in marine mammals: From biochemistry to behavior. Journal of <u>Comparative Physiology B</u> 184:23-53
- Quigg A, Nunnally CC, McInnes AS, Gay S, Rowe GT, **Davis** RW (2013) Hydrographic and biological controls in two subarctic fjords: an environmental case study of how climate change could impact phytoplankton communities. <u>Marine Ecology</u> <u>Progress Series</u> 480: 21-37
- Dasmeh P, **Davis** RW, Kepp KP (2013) Aerobic dive limits of seals with mutant myoglobin using combined thermochemical and physiological data. <u>Comparative</u> <u>Biochemistry and Physiology</u>
- Dassis M, Rodríguez D, Leno EN, **Davis** RW (2013) Submerged swimming and resting metabolic rates in Southern sea lions. Journal Experimental Marine Biology and Ecology 432-433:106-112
- **Davis** RW, Fuiman LA, Madden K, Williams TM (2013) Classification and behavior of free-ranging Weddell seal dives based on three-dimensional movements and video-recorded observations. <u>Deep Sea Research Part II</u> 88:65-77
- Rodríguez DH, Dassis M, Ponce de León A, Barreiro C, Farenga M., Bastida RO, **Davis** RW (2013) Foraging strategies of Southern sea lion females in La Plata River Estuary (Argentina-Uruguay). <u>Deep Sea Research Part II</u> 88:120-130
- **Davis** RW, Williams TM (2012) The dive response is exercise modulated to maximize aerobic dive duration. Journal of Comparative Physiology A 198:583-591
- Wolt R, Gelwick FP, Weltz F, Davis RW (2012) Foraging behavior and prey preference of sea otters (<u>Enhydra lutris kenyoni</u>) in a predominantly soft sediment habitat in Alaska. <u>Mammalian Biology</u> 77:271-280
- Gilkinson AK, Finerty SE, Weltz F, Dellapenna, T.M., **Davis** RW (2011) Habitat associations of sea otters (Enhydra lutris) in a soft- and mixed-sediment benthos in Alaska. <u>Journal of Mammalogy</u> 92:1278-1286
- Osterrieder SK, **Davis** RW (2011) Sea otter female and pup activity budgets, Prince William Sound, Alaska. Journal of the Marine Biological Association of the United Kingdom 91:882-892

- Lee OA, Gelwick F, **Davis** RW (2010) Summer foraging tactics in sea otters (*Enhydra lutris*): Maintaining foraging efficiencies in a stable population in Alaska. <u>Aquatic</u> <u>Mammals</u> 36:351-364
- Finerty SE, Pearson HC, **Davis** RW (2010) Inter-annual assessment of territory quality for male sea otters (*Enhydra lutri*s) in Simpson Bay, Prince William Sound, Alaska. <u>Canadian Journal of Zoology</u> 88:289-298
- Osterrieder SK, **Davis** RW (2009) Summer foraging behavior of female sea otters (*Enhydra lutris*) with pups in Simpson Bay, Alaska. <u>Aquatic Mammals</u> 35:481-489
- Liwanag HEM, Williams TM, Costa DP, Kanatous SB, **Davis** RW, Boyd IL (2009) The effects of water temperature on the energetic costs of juvenile and adult California sea lions (*Zalophus californianus*): The importance of skeletal muscle thermogenesis for thermal balance. Journal of Experimental Biology 212:3977-3984
- Lee OA, Olivier PA, Wolt RC, Weltz F, **Davis** RW (2009) Aggregations of sea otters feeding on fish eggs and kelp in Prince William Sound, Alaska. <u>American Midland</u> <u>Naturalist</u> 161:401-405
- Finerty SE, Pearson HC, **Davis** RW (2009) Summer activity pattern and field metabolic rate of adult male sea otters (*Enhydra lutris*) in a soft sediment habitat in Alaska. Journal of Experimental Marine Biology and Ecology 377:36-42
- Noll CJ, Dellapenna TM, Gilkinson A, Weltz F, **Davis** RW (2008) A high resolution geophysical investigation of sedimentary processes in a turbid outwash fjord: Simpson Bay, Prince William Sound, Alaska. <u>Geo-Marine Letters</u> 29:1-16
- Madden KM, Fuiman LA, Williams TM, **Davis** RW (2008) Identification of foraging dives in free-ranging Weddell seals (*Leptonychotes weddellii*): Confirmation using video records. <u>Marine Ecology Progress Series</u>. 365:263-275
- Kanatous SB, Watson RR, Williams TM, **Davis** RW (2008) The Ontogeny of skeletal muscle adaptations that transform young Weddell seals into long-duration deep divers. <u>Journal of Experimental Biology</u> 211:2559-2565
- Finerty SE, Hillman GR, **Davis** RW (2007) Computer matching of sea otter (*Enhydra lutris*) nose scars: A new method for tracking individual otters. <u>Aquatic Mammals</u> 33:349-358
- Gilkinson AK, Pearson HC, Weltz F, **Davis** RW (2007) Photo-identification of sea otters using nose scars. Journal of Wildlife Management 71:2045–2051
- **Davis** RW, Weihs D (2007) Locomotion in deep diving elephant seals: Physical and physiological constraints. <u>Philosophical Transactions of the Royal Society B</u> 362:2141-2150
- Fuiman LA, Madden KM, Williams TM, **Davis** RW (2007) Structure of foraging dives by Weddell seals at an isolated hole in the Antarctic fast-ice environment. <u>Deep-Sea</u> <u>Research II</u> 54:270-289
- Davis RW, Jaquet N, Gendron D, Bazzino G, Markaida U, Gilly W (2007) Diving behavior of sperm whales in relation to the behavior of their main prey, jumbo squid in the Gulf of California, Mexico. <u>Marine Ecology Progress Series</u> 333:291-302

- Watson RR, Miller TA, **Davis** RW (2007) Mitochondrial volume density and distribution in harbor seal skeletal muscle. Journal of Comparative Physiology. Part B 177:89-98
- Wright TJ, **Davis** RW (2006) The effect of myoglobin concentration on aerobic dive limit in Weddell seals. Journal of Experimental Biology 209:2576-2585
- **Davis** RW, Brandon EAA, Calkins DG, Loughlin TR (2006) Female attendance and pup growth in Steller sea lions (*Eumetopias jubatus*). <u>Sea Lions of the World</u>. University of Alaska Fairbanks, pp 13-30
- Rodríguez D, Bastida R, Calkins DG, **Davis** RW (2006) Movements of a juvenile Southern sea lion in La Plata River estuary (Argentina-Uruguay). <u>Sea Lions of</u> <u>the World</u>. University of Alaska Fairbanks, pp 285-293
- Polasek L, Dickson KA, **Davis** RW (2006) Spatial heterogeneity of aerobic and glycolytic enzyme activities and myoglobin concentration in the epaxial swimming muscles of the harbor seal (*Phoca vitulina*). <u>American Journal of Physiology</u>: Regulatory, Integrative and Comparative Physiology 290:R1720-R1727
- Pearson HC, Packard JM, **Davis** RW (2006) Territory quality of male sea otters in Prince William Sound, Alaska: Relation to body and territory maintenance behaviors. Canadian Journal of Zoology 84:939-946
- Pearson HC, **Davis** RW (2005) Behavior of territorial male sea otters (*Enhydra lutris*) in Prince William Sound, Alaska. <u>Aquatic Mammals</u> 31:226-233
- Gamel CM, **Davis** RW, David JHM, Meyer M (2005) Reproductive energetics and female attendance patterns of Cape fur seals during early lactation. <u>American Midland Naturalist</u> 153:152-170
- Brandon EAA, **Davis** RW, Calkins DG, Loughlin TR (2005) Neonatal growth of Steller's sea lion pups. <u>Fisheries Bulletin</u> 103:246-257
- **Davis** RW, Polasek L, Watson RR, Fuson A, Williams TM, Kanatous SB (2004) The diving paradox: New insights into the role of the dive response in air-breathing vertebrates. Journal Comparative Biochemistry and Physiology, Part A 138:263-268
- Williams TM, Fuiman LA, Horning M, **Davis** RW (2004) The cost of foraging by a marine predator, the Weddell Seal (*Leptonychotes weddellii*): Pricing by the stroke. Journal Experimental Biology 207:973-982
- **Davis** RW, Hagey W, Horning M (2004) Monitoring the behavior and multi-dimensional movements of Weddell seals using an animal-borne video and data recorder. <u>Memoirs of the National Institute of Polar Research</u>, Special Issue 58:148-154
- Evans WE, Thomas J, **Davis** RW (2004) Vocalizations from Weddell seals (*Leptonychotes weddellii*) during diving and foraging. In: <u>Echolocation in Bats</u> and Dolphins. (J Thomas, C Moss and M Vater, eds). University of Chicago Press, Chicago, Illinois, pp 541-546
- **Davis** RW, Fuiman LA, Williams TM, Horning M, Hagey W (2003) Classification of Weddell seal dives based on three-dimensional movements and video recorded observations. <u>Marine Ecology Progress Series</u> 264:109-122
- Watson RR, Miller TA, **Davis** RW (2003) Immunohistochemical fiber typing of harbor seal skeletal muscle. Journal of Experimental Biology 206:4105-4111

Fuson AL, Cowan DF, Kanatous SB, Polasek LK, **Davis** RW (2003) Adaptations to diving hypoxia in the heart, kidneys and splanchnic organs of harbor seals (*Phoca vitulina*). Journal of Experimental Biology 206:4139-4154

- Kanatous SB, **Davis** RW, Watson R, Polasek L, Williams TM, Mathieu-Costello O (2002) Aerobic capacities in the skeletal muscles of Weddell seals: key to longer dive durations? <u>Journal of Experimental Biology</u> 205:3601-3608
- Fuiman L, **Davis** RW, Williams TM (2002) Behavior of midwater fishes beneath the Antarctic sea ice: a predator's perspective. <u>Marine Biology</u> 140:815-822
- **Davis** RW, Ortega-Ortiz J, Ribic CA, Evans WE, Biggs DC, Ressler PH, Cady RB, Harris EJ, Leben RR, Mullin KD, Würsig B (2002) Cetacean habitat in the northern Gulf of Mexico. <u>Deep-sea Research</u>, Part I 49:121-142
- **Davis** RW, Fuiman L, Williams TM, Le Boeuf BJ (2001) Three-dimensional movements and swimming activity of a female northern elephant seal. <u>Comparative</u> <u>Biochemistry and Physiology. Part A</u> 129:759-770
- Williams TM, Haun J, Davis RW, Fuiman L, Kohin S (2001) A Killer Appetite: Metabolic consequences of carnivory in marine mammals. <u>Comparative Biochemistry and</u> <u>Physiology. Part A</u> 129:785-796
- Polasek L, **Davis** RW (2001) Heterogeneity of myoglobin distribution in the locomotory muscles of five cetacean species. Journal of Experimental Biology 204:209-215
- Williams TM, Davis RW, Fuiman L, Francis J, Le Boeuf BJ, Horning M, Calambokidis J, Croll DA (2000) Sink or Swim: Strategies for cost-efficient diving by marine mammals. <u>Science</u> 288:133-136
- Lowry LF, Burkanov VN, Frost, KJ, Simpkins MA, **Davis** RW, DeMaster DP, Suydam R, Springer A (2000) Habitat use and habitat selection by spotted seals (*Phoca largha*) in the Bering Sea. <u>Canadian Journal of Zoology</u> 78:1959-1971
- **Davis** RW, Fuiman L, Williams TM, Collier S, Hagey W, Kanatous, SB, Kohin S, Horning M (1999) Hunting behavior of a marine mammal beneath the Antarctic fast-ice. <u>Science</u> 283:993-996
- Skrovan RC, Williams TM, Berry PS, **Davis** RW (1999) The diving physiology of bottlenose dolphins (*Tursiops truncatus*) III: Biomechanics and changes in buoyancy at depth. Journal of Experimental Biology 202:2749-2761
- **Davis** RW and Kanatous SB (1999) Convective oxygen transport and tissue oxygen consumption in Weddell seals during aerobic dives. <u>Journal of Experimental</u> <u>Biology</u> 202:1091-1113
- Kanatous SB, **Davis** RW, DiMichele LV, Cowan DF (1999) High aerobic capacities in the skeletal muscles of seals, sea lions and fur seals: An adaptation to diving hypoxia. Journal of Applied Physiology 86:1247-1256
- **Davis** RW, Fargion GS, May N, Leming TD, Evans WE, Hansen LJ, Mullin K (1998) Physical habitat of cetaceans along the continental slope in the north-central and western Gulf of Mexico. <u>Marine Mammal Science</u> 14:490-507
- Lowry LF, Frost KJ, **Davis** RW, DeMaster DP, Suydam RS (1998) Movements of spotted seals (*Phoca largha*) in the Bering and Chukchi Seas. <u>Polar Biology</u> 19:221-230

- Ribic C, **Davis** RW, Hess N, Peake DE (1997) Distribution of seabirds in the northern Gulf of Mexico in relation to mesoscale features: initial observations. <u>ICES</u> <u>Journal of Marine Sciences</u>. 54:545-551
- **Davis** RW, Worthy GAJ, Würsig B, Lynn SK, Townsend FI (1996) Diving behavior and at-sea movements of an Atlantic spotted dolphin in the Gulf of Mexico. <u>Marine</u> <u>Mammal Science</u> 12:569-581
- Weller DW, Würsig B, Whitehead H, Norris JC, Lynn SK, Davis RW, Clauss N, Brown P (1996) Observations of an interaction between sperm whales and short-finned pilot whales in the Gulf of Mexico. <u>Marine Mammal Science</u> 12:588-593
- Boyd IL, Butler PJ, Woakes AJ, **Davis** RW (1995) Validation of heart rate and doublylabeled water as measures of metabolic rate during swimming in California sea lions. <u>Functional Ecology</u>. 9:151-160
- Williams, TM, Davis RW, McBain JF, Tuomi PA, Wilson RK, McCormick CR, Donoghue S (1995) Diagnosing and Treating Common Clinical Disorders of Oiled Sea Otters. In: <u>Emergency Care and Rehabilitation of Oiled Sea Otters: A Guide for</u> <u>Large and Small Oil Spills Involving Fur-bearing Marine Mammals</u>. (TM Williams and RW Davis, eds). University of Alaska Press
- Davis RW, Styers J, Otten JM (1995) Facility Management and Personnel. In: <u>Emergency Care and Rehabilitation of Oiled Sea Otters: A Guide for Large and</u> <u>Small Oil Spills Involving Fur-bearing Marine Mammals</u>. (TM Williams and RW Davis, eds). University of Alaska Press
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BOOKS AND MONOGRAPHS

Davis RW (ed) (in prep) <u>Ethology of Sea and Marine Otters and the Polar Bear</u>. Springer, Heidelberg

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EDITORSHIP

2015-18 Associate Editor for Frontiers of Science

FILMS

"Hunters of the Deep" Produced by Yashiro Koyama and Japan's public broadcaster NHK featuring the southern elephant seal research of Randall **Davis** in Peninsula Valdez, Argentina. Presented on Japanese television

"The World of Weddell Seals" First place winner in the Jack Ward Competition for Non-Commercial Films presented to Jesse E. Purdy and Randall W. **Davis**, Co-Producers: The 45th Animal Behavior Society Annual Meeting, Snowbird, Utah

"Squid vs Whale" Produced by Off the Fence Productions and National Geographic featuring the sperm whale research of Randall **Davis** in the Gulf of California. Presented on Animal Planet and National Geographic television

"Legends of the Deep: The giant squid" Produced by Yashiro Koyama and Japan's public broadcaster NHK featuring the sperm whale research of Randall **Davis** in the Ogasawara Islands (Western Pacific Ocean) and narrated by Sir David Attenborough. Presented on Animal Planet and Japanese television

"Saving Alaska's otters and America's worst oil spill" Produced by Armstrong Information Services and Exxon Corporation featuring Randall **Davis** and Terrie Williams during the oiled sea otter rehabilitation program following the Exxon Valdez oil spill. Used for education and training

POPULAR ARTICLES

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- Davis RW (2000) Rescuing Sea Otters. <u>Dragonfly</u>. May/June Issue
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- Biggs DC and RW **Davis** (1996) Thar she blows! GulfCet cruise news. <u>Quarterdeck</u>, Texas A&M University: 4(3):18-19
- Davis RW (1993) Sea Mammals and Oil: Confronting the Risks. <u>Marine Mammal</u> <u>Science</u> 9:337-339
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REPORTS

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- Davis RW, Styers J. (1990) History of the Sea Otter Rehabilitation Centers. In: <u>Sea Otter Symposium: Proceedings of a symposium to evaluate the response effort on behalf of sea otters after the T/V Exxon Valdez oil spill into Prince William Sound, Alaska.</u> K. Bayha and J. Kormendy, Technical Coordinators. U.S. Fish and Wildlife Service, Biological Reports 90(12). pp 142-157
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- **Davis** RW, Williams TM, Awbrey F. (1988) <u>Sea Otter Oil Spill Avoidance Study</u>. A report o the U.S. Department of the Interior, Minerals Management Service, Pacific OCS Office. 80 pp
- **Davis** RW, Thomas JA, Williams TM. (1986) <u>Sea Otter Oil Spill Mitigation Study</u>. A report to the U.S. Department of the Interior, Minerals Management Service, Pacific OCS Office. Report number OCS86-0009. 219 pp
- Stewart B, Thomas JA, **Davis** RW. (1985) <u>Review of the Proposal to List the Guadalupe</u> <u>Fur Seal as an Endangered Species</u>. A report to the Western Oil and Gas Association (WOGA). 55 pp

ORAL AND POSTER PRESENTATIONS WITH ABSTRACTS

Fifty-eight (58) oral presentations with first-author abstracts and 38 co-author oral presentations with abstracts for a total of 96. Twenty-one (21) of the 57 first-author oral presentations were invited and 23 were at an international venue. Six (6) first-author poster and 61 co-author poster presentations with abstracts for a total of 66 of which 35 were at an international venue. **Total oral and poster presentations with abstracts: 162**.

- 2018 International Sea Turtle Symposium, Kobe, Japan. "Diving and foraging behavior of leatherback sea turtles (Dermochelys coriacea) nesting on St. Croix, US Virgin Islands." Co-author (Oral presentation, Abstract).
- 2017 Bio-logging VI, Lake Constance, Germany. "Seasonal comparison of Weddell seal dives under high and low light conditions based on three-dimensional movements and video-recorded behavior." (Poster, Abstract).
- 2017 Bio-logging VI, Lake Constance, Germany. "Consistent Bearing During Terrestrial Movement Suggests Guided Navigation by Antarctic Seals." Coauthor (Poster, Abstract).
- 2016 Orientation and Navigation Birds, Humans and Other Animals. Royal Institute of Navigation, London, UK "Field testing short-term geomagnetic navigation in an Antarctic seal" Co-author (Oral presentation, Abstract).
- 2015 Society for Integrative and Comparative Biology, Palm Beach, Florida. "The Moveable Feast: A comparison of foraging tactics and energetics in large, stealthy marine and terrestrial carnivores" Co-author (Oral presentation, Abstract).

- 2015 Society for Integrative and Comparative Biology, Palm Beach, Florida. "Locomotion and the cost of hunting in large, stealthy marine carnivores" Coauthor (Oral presentation, Abstract).
- 2015 Twenty-first Biennial Conference on the Biology of Marine Mammals, San Francisco, California. "Development of an altricial mammal at sea: Energy budgets of female sea otters and their pups in Simpson Bay, Alaska" Co-author (Oral presentation, Abstract).
- 2014 Bio-logging V, Strasbourg, France. "Classification of free-ranging Weddell seal dives during the late winter based on three-dimensional movements and video-recorded prey capture." (Poster, Abstract).
- 2014 Bio-logging V, Strasbourg, France. "Foraging tactics of Weddell seals in McMurdo Sound, Antarctica, and their changes with seasonal variations in ambient light." Co-author (Oral presentation, Abstract).
- 2014 Bio-logging V, Strasbourg, France. "Diving behavior and foraging strategies of southern elephant seals." Co-author (Poster, Abstract).
- 2014 Marine Mammals of the Holarctic VIII, St. Petersburg. "Consecutive winter migrations of northern fur seals on the Commander Islands." Co-author (Oral presentation, Abstract).
- 2013 Twentieth Biennial Conference on the Biology of Marine Mammals, Dunedin, New Zealand. "Are vibrissae of northern elephant seals viable sensory structures for prey capture?" Co-author (Poster presentation, Abstract).
- 2013 Twentieth Biennial Conference on the Biology of Marine Mammals, Dunedin, New Zealand. "Activity budgets for female sea otters and their pups in Alaska." Co-author (Poster presentation, Abstract).
- 2012 Society for Experimental Biology 2012, Salzburg, Austria. "Multi-level integration of adaptations for maximizing aerobic dive duration in marine mammals: From biochemistry to behavior." Invited speaker (Abstract).
- 2012 Experimental Biology 2012, San Diego, California. "Myoglobin oxygen affinity among marine and terrestrial vertebrates." Co-author (Poster presentation, Abstract).
- 2011 Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida. "The marine mammal dive response is exercise modulated to maximize aerobic dive duration." (Oral presentation, Abstract).
- 2011 Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida. "Predicting foraging hot spots for marine mammals: An eco-physiological perspective." Co-author (Oral presentation, Abstract).
- 2011 Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida. "Habitat associations of northern fur seal (*Callorhinus ursinus*) pups from Bering Island, Russia." Co-author (Oral presentation, Abstract).
- 2011 Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida. "Use of animal-borne video and data recorders to link foraging success with 3-dimensional movements in Steller sea lions." Co-author (Oral presentation, Abstract).

- 2011 Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida. "Female and pup sea otter activity budgets during the first three months postpartum." Co-author (Oral presentation, Abstract).
- 2011 Bio-logging IV, Hobart, Tasmania. "Classification of free-ranging Weddell seal dives based on three-dimensional movements and video-recorded prey capture." (Oral presentation, Abstract).
- 2011 Bio-logging IV, Hobart, Tasmania. "Foraging areas of female southern sea lions (*Otaria flavescens*) in the La Plata River Estuary (Argentina-Uruguay)." Co-author (Oral presentation, Abstract).
- 2011 Bio-logging IV, Hobart, Tasmania. "Diving behavior and offshore activity budget during foraging trip of a female South American sea lion (*Otaria fravescens*) off Isla de Lobos (Uruguay)." Co-author (Poster presentation, Abstract).
- 2011 Bio-logging IV, Hobart, Tasmania. "Economy of scale: The world's largest fish closely manages it's swimming costs." Co-author (Poster presentation, Abstract).
- 2011 Bio-logging IV Workshop on the Use of Visual Media with Data in Bio-logging, Hobart, Tasmania. Workshop entitled "Using Animal-borne Video Recorders as a Method of Studying Marine Life." Workshop co-organizer (Oral presentation).
- 2011 North Pacific Research Board Marine Science Symposium, Anchorage, Alaska. "Steller sea lion foraging on Atka mackerel in the Kuril Islands revealed by animal-borne video and data recorders." Co-author (Oral presentation, Abstract).
- 2011 North Pacific Research Board Marine Science Symposium, Anchorage, Alaska. "Foraging ecology of lactating northern fur seals (*Callorhinus ursinus*) on the Commander Islands." Co-author (Poster presentation, Abstract).
- 2010 Society for Experimental Biology, Prague, Czech Republic. "The dive response is also an exercise response." (Oral Presentation, Abstract).
- 2010 Aquatic Mammals of South America, Florianopolis, Brazil. "Diving behavior and offshore activity budget during a foraging trip of a female South American sea lion off Isla de Lobos, Uruguay." Co-author (Poster presentation, Abstract).
- 2010 Marine Mammals of the Holarctic, Kaliningrad, Russia. "Range expansion and population decline in fur seals: a simulation model of northern fur seal (*Callorhinus ursinus*) dynamics from a metapopulation perspective." Co-author (Poster presentation, Abstract).
- 2010 Society for Experimental Biology, Prague, Czech Republic. "The dive response is also an exercise response." (Oral Presentation, Abstract).
- 2010 Twenty-fourth Conference of the European Cetacean Society, Stralsund, Germany. "Summer Foraging Behaviour of Female Sea Otters (*Enhydra lutris*) with Pups in Simpson Bay, Alaska." Co-author. (Poster, Abstract).
- 2010 Twenty-fourth Conference of the European Cetacean Society, Stralsund, Germany. "Killer whale (*Orcinus orca*) predation events on northern fur seals (*Callorhinus ursinus*) near the Commander Islands (Russia)." Co-author. (Poster, Abstract).
- 2010 Southern Sea Otter Research Update Workshop, Santa Cruz, California. "Summer sea otter female and pup activity budgets in Prince William Sound, Alaska." Co-author. (Oral presentation, Abstract).

- 2010 North Pacific Research Board Marine Science Symposium, Anchorage, Alaska. "Summer foraging area segregation of lactating northern fur seals from the Severnoe and Severo-Zapadnoe rookeries of Bering Island (Commander Islands, Russia)." Co-author. (Poster, Abstract).
- 2009 Kyoto University International Symposium: New Horizons of Academic Visual-Media Practices, Kyoto, Japan. "Animal-borne Video Recorders as a Method for Studying Marine Life." (Invited oral presentation, Symposium publication).
- 2009 Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada. "Foraging behavior of northern fur seal pups (*Callorhinus ursinus*) from the Commander Islands, Russia during their first winter at sea." Co-author. (Oral presentation, Abstract).
- 2009 Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada. "Use of geolocation tags to study northern fur seal *(Callorhinus ursinus)* winter migrations." Co-author. (Poster, Abstract).
- 2009 Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada. "Territory size and quality for male sea otters (*Enhydra lutris*) in Simpson Bay, Prince William Sound, Alaska." Co-author. (Poster, Abstract).
- 2009 Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada. "New insight into the foraging behavior of Steller sea lions using an animal-borne video and data recorder." Co-author. (Poster, Abstract).
- 2009 Eighteenth Biennial Conference on the Biology of Marine Mammals, Quebec City, Canada. "Time Budget of Female Sea Otters (*Enhydra lutris kenyoni*) with Dependant Pups in a Stable Population in Alaska." Co-author. (Poster, Abstract).
- 2009 Sixth Biennial International Marine Animal Trainers' Association Sea Otter Conservation Workshop, Seattle, Washington (2009) "Activity Pattern and Field Metabolic Rate of Adult Male Sea Otters (*Enhydra lutris*) in a Soft Sediment Habitat in Alaska." (Oral Presentation, Abstract).
- 2009 Sixth Biennial International Marine Animal Trainers' Association Sea Otter Conservation Workshop, Seattle, Washington (2009) "Foraging Behavior of Sea Otters (*Enhydra lutris kenyoni*) in a Predominantly Soft Sediment Habitat in Alaska." Co-author. (Oral presentation, Abstract).
- 2009 Sixth Biennial International Marine Animal Trainers' Association Sea Otter Conservation Workshop, Seattle, Washington. (2009) "Spatial scales of northern sea otter (*Enhydra lutris kenyoni*) foraging behavior in Prince William Sound, Alaska." Co-author. (Oral presentation, Abstract).
- 2009 North Pacific Research Board Marine Science Symposium, Anchorage, Alaska. "Insights into the foraging behavior of Steller sea lions using an animal-borne video and data recorder." Co-author. (Oral presentation, Abstract).
- 2008 XIII Reunión de Trabajo de Especialistas en Mamíferos Acuáticos de América del Sur (Montevideo, Uruguay). "Comportamiento de buceo en hembras del lobo marino de un pelo (*Otaria flavescens*) provenientes de Isla de Lobos (Uruguay)." Co-author. (Oral presentation, Abstract).
- 2008 XIII Reunión de Trabajo de Especialistas en Mamíferos Acuáticos de América del Sur (Montevideo, Uruguay). "Movimientos en mar abierto de hembras de

Otaria flavescens provenientes de Isla de Lobos (Uruguay)." Co-author. (Oral presentation, Abstract).

- 2008 European Association for Aquatic Mammals, Malta. "Feeding trips of lactating Northern fur seals (*Callorhinus ursinus*) on the Commander Islands, Russia." Coauthor. (Poster, Proceedings).
- 2008 Bio-logging III, Monterey, California. "Quantifying pinniped foraging attempts using measurements of head striking." Co-author. (Poster, Proceedings).
- 2008 Forty-fifth Annual Meeting of the Animal Behavior Society, Snowbird, Utah. "Weddell seal courtship: Relationships between vocalizations and behaviors." Co-author. (Poster, Abstract).
- 2008 North Pacific Research Board Marine Science Symposium, Anchorage, Alaska. "Winter Movements, Foraging Behavior and Habitat-Associations of Northern Fur Seal Pups on the Commander Islands." Co-author. (Oral presentation, Abstract).
- 2008 International Conference on Informatics Education and Research for Knowledge-Circulating Society, University of Kyoto, Kyoto, Japan. "Bio-logging as a method for understanding natural systems." Invited speaker. (Oral presentation, Abstract).
- 2007 National Geographic Animal-Borne Imaging Symposium, Washington, DC. "Ethology of diving vertebrates at sea: New advances with video recorded behavior, three-dimensional dive analysis and habitat associations." Invited speaker. (Oral presentation, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Olfaction of abiotic objects and the social environment in Steller Sea Lion`s (*Eumetopias jubatus*) rookery life." Co-author. (Poster, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Variability in Performance Characteristics of Myoglobin in Terrestrial and Marine Mammal Species." Co-author. (Poster, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Diving and resting oxygen consumption in Southern sea lion (*Otaria flavescens*) females." Co-author. (Poster, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Foraging Behavior of Sea Otters (*Enhydra lutris*) in a Predominantly Soft Sediment Habitat in Alaska." Co-author. (Poster, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Behavior of Male Sea Otters (*Enhydra lutris*) in Simpson Bay, Prince William Sound, Alaska." Co-author. (Poster, Abstract).
- 2007 Seventeenth Biennial Conference on the Biology of Marine Mammals, Cape Town, South Africa. "Spatial scales of sea otter (*Enhydra lutris kenyoni*) foraging behavior in Prince William Sound, Alaska." Co-author. (Poster, Abstract).
- 2007 Third Symposium of the Japanese Bio-logging Association, Sapporo, Japan. "Diving behavior of sperm whales and their jumbo squid prey." Invited speaker. (Oral presentation).

- 2006 Marine Mammals of the Holarctic, St. Petersburg, Russia. "Energy intake and growth of Steller sea lion pups." (Oral presentation, Abstract)
- 2006 Jones Symposium, Vancouver, Canada. "Locomotion in diving elephant seals: Physical and physiological constraints." (Oral presentation).
- 2006 Croxall Symposium, Cambridge, England. "Relationship between craniodental morphology and hunting behavior in Weddell seals." Invited speaker.
- 2006 Ocean Sciences Meeting, American Geophysical Union. Honolulu, Hawaii, "Using marine mammals as "biological autonomous underwater platforms" to study their natural history and the ocean environment." Co-author. (Poster, Abstract).
- 2005 Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego. "Diving behavior of sperm whales and their jumbo squid prey." (Oral presentation, Abstract).
- 2005 Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego. "Habitat associations and diving activity of subadult Steller sea lions (*Eumetopias jubatus*) during the winter and spring in the north-central Gulf of Alaska." Coauthor. (Oral presentation, Abstract).
- 2005 Sixteenth Biennial Conference on the Biology of Marine Mammals, San Diego. "Behavior of territorial male sea otters in Prince William Sound, Alaska." Coauthor. (Poster presentation, Abstract).
- 2005 Bio-logging II, St. Andrews, Scotland. "Diving Behavior of Weddell Seals Based on Three-Dimensional Movements Paired with Video Recorded Observations." (Oral presentation, Proceedings).
- 2005 Bio-logging II, St. Andrews, Scotland. "Hunting behavior of Weddell seals (*Leptonychotes weddellii*) diving from an isolated hole in McMurdo Sound, Antarctica." Co-author. (Oral presentation, Proceedings).
- 2004 Marine Mammals of the Holarctic III, Koktebel, Ukrania. "Critical habitat of juvenile Steller sea lions (*Eumetopias jubatus*) during the winter in the north-central Gulf of Alaska." (Oral presentation, Abstract).
- 2004 Sea Lions of the World Symposium, Anchorage Alaska. "Indices of reproductive effort and neonatal condition in Steller sea lions (*Eumetopias jubatus*)." (Oral presentation, Proceedings).
- 2004 Sea Lions of the World Symposium, Anchorage Alaska. "Movements of a juvenile Southern sea lion in the La Plata River estuary (Argentina-Uruguay)." Co-author. (Oral presentation, Proceedings).
- 2004 Sea Lions of the World Symposium, Anchorage Alaska. "Critical habitat assessment for juvenile Steller sea lions (*Eumetopias jubatus*) during the winter in the north-central Gulf of Alaska." Co-author. (Poster, Abstract).
- 2004 American Physiological Society Intersociety Meeting: The Integrative Biology of Exercise. "The ontogeny of skeletal muscle. adaptations that transform young Weddell seals into elite, deep long duration divers." Co-author. (Poster, Abstract).

- 2004 SCAR Open Science Conference, Bremen, Germany. "The Ontogeny of skeletal muscle adaptations that transform young Weddell Seals into long-duration deep divers." Co-author. (Poster, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "Classification of Weddell seal dives based on three-dimensional movements and video recorded behavior." (Oral presentation, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "Habitat Associations of Sea Otters in Prince William Sound, Alaska." Co-author. (Poster, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "A cost-benefit analysis for territorial male sea otters in Prince William Sound, Alaska." Co-author. (Poster, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "Winter movements, diving patterns, and habitat associations of juvenile Steller sea lions (*Eumetopias jubatus*) in Prince William Sound and Resurrection Bay, Alaska." Co-author. (Poster, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "The effect of myoglobin concentration on aerobic dive limit." Co-author. (Poster, Abstract).
- 2003 Fifteenth Biennial Conference on the Biology of Marine Mammals, Greensboro. "Mapping mitochondrial volume density in the swimming muscles of harbor seals (*Phoca vitulina*)." Co-author. (Poster, Abstract).
- 2003 International Symposium on Bio-logging, National Institute of Polar Research, Tokyo, Japan. "A digital video/data recorder for monitoring the behavior and multi-dimensional movements of marine mammals at sea." Invited Speaker (Abstract).
- 2002 The Power of Comparative Physiology: Evolution, Integration and Application, American Physiological Society, San Diego. "The balance between hypoxia and aerobic metabolism in seals during diving." Invited Speaker (Abstract).
- 2002 The Power of Comparative Physiology: Evolution, Integration and Application, American Physiological Society, San Diego. "The effect of behavior on physiological dive capacity in marine mammals: What lies beneath." Coauthor. (Oral presentation, Abstract).
- 2002 The Power of Comparative Physiology: Evolution, Integration and Application, American Physiological Society, San Diego. "Metabolic indicators in harbor seal muscle tissue." Co-author. (Poster, Abstract).
- 2002 The Power of Comparative Physiology: Evolution, Integration and Application, American Physiological Society, San Diego. "Fiber type composition in the swimming muscles of harbor seals (*Phoca vitulina*)." Co-author. (Poster, Abstract).
- 2002 The Power of Comparative Physiology: Evolution, Integration and Application, American Physiological Society, San Diego. "Aerobic capacity in the skeletal muscles of Weddell seals." Co-author. (Poster, Abstract).

- 2002 A Sustainable Gulf of Mexico, Texas A&M University, College Station. "Cetaceans of the Oceanic Gulf of Mexico." Invited Speaker (Abstract)
- 2001 Fourteenth Biennial Conference on the Biology of Marine Mammals, Vancouver. "High aerobic capacities in the heart and splanchnic organs of harbor seals: Adaptations to diving hypoxia." Co-author. (Poster, Abstract).
- 2001 Fourteenth Biennial Conference on the Biology of Marine Mammals, Vancouver. "Harbor seal muscle tissue is geared for aerobic lipid metabolism." Co-author. (Poster, Abstract).
- 2001 Fourteenth Biennial Conference on the Biology of Marine Mammals, Vancouver. "Fiber type composition in the swimming muscles of harbor seals." Co-author. (Poster, Abstract).
- 2000 Kooyman Symposium: Diving, Physiology and Behavior, La Jolla, CA. "Threedimensional movements and swimming activity of a female northern elephant seal." Invited speaker.
- 2000 Kooyman Symposium: Diving, Physiology and Behavior, La Jolla, CA. "A Killer Appetite: Metabolic consequences of carnivory in marine mammals." Co-author. (Oral presentation)
- 1999 Eighteenth Annual Gulf of Mexico Information Transfer Meeting, New Orleans, Louisiana. "Cetacean Habitat Associations in the Northern Gulf of Mexico: An Overview." Co-author. (Oral presentation, Proceedings).
- 1999 Thirteenth Biennial Conference on the Biology of Marine Mammals, Hawaii. "Cetacean habitat associations in the northern Gulf of Mexico." Co-author. (Oral presentation, Abstract).
- 1999 Thirteenth Biennial Conference on the Biology of Marine Mammals, Hawaii. "Habitat use and habitat selection by spotted seals (*Phoca largha*) in the Bering Sea." Co-author. (Oral presentation, Abstract).
- 1999 Thirteenth Biennial Conference on the Biology of Marine Mammals, Hawaii. "Sound production by a Weddell seal (*Leptonychotes weddellii*) during foraging." Co-author. (Oral presentation, Abstract).
- 1999 XXVI International Ethological Conference. Bangalore, India. August 2-9. "Convective Oxygen Transport and Tissue Oxygen Consumption in Weddell Seals during Aerobic Dives." Invited speaker. (Abstract).
- 1999 Pacific Division AAAS Symposium, Biology of Organisms in Extreme Environments. San Francisco, CA. June 1999. "Deep Thinking by Marine Mammals: How Behavioral Strategies Dictate Athletic Performance at Depth." Co-author (Oral presentation, Abstract).
- 1999 14th International Annual Meeting for the Study of Marine Mammals, Mazatlan, Mexico. "Cetacean habitat associations in the northern Gulf of Mexico." Coauthor (Poster, Abstract).
- 1999 Federation of American Societies for Experimental Biology, Washington, D.C. "Enhanced aerobic capacities in the skeletal muscles of Weddell seals: A key to longer dive durations?" Co-author (Poster, Abstract).
- 1998 Annual Gulf of Mexico Information Transfer Meeting, 8-10 December 1998. U.S. Dept. of the Interior, Minerals Management Service, Kenner, LA. "Cetacean

Habitat Associations in the Northern Gulf of Mexico: An Overview." Co-author. (Oral presentation, Proceedings).

- 1998 Monterey Bay Aquarium Research Institute, Moss Landing, CA. "Using Marine Animals as Platforms for Deep Sea Video and Data Recording." Invited speaker.
- 1998 Twelfth Biennial Conference on the Biology of Marine Mammals, Monte Carlo, Monaco. "Investigation of the diving behavior, home range and movements of Heaviside's dolphins off the west coast of Africa." Co-author. (Poster, Abstract).
- 1998 Twelfth Biennial Conference on the Biology of Marine Mammals, Monte Carlo, Monaco. "Fatty acid profiles suggest regional differences in the foraging ecology of Alaskan Steller sea lions." Co-author. (Poster, Abstract).
- 1998 Twelfth Biennial Conference on the Biology of Marine Mammals, Monte Carlo, Monaco. "Satellite-monitored movements and diving patterns of Heaviside's dolphin." Co-author. (Poster, Abstract).
- 1997 Fifth Scientific Meeting of the Oceanography Society, Seattle, Washington. "Thar she blows: Sperm whales, SST fronts and cyclonic eddies in the Gulf of Mexico." Co-author (Poster, Abstract).
- 1997 Wildlife Society GIS/Remote Sensing Interactive Poster Session, September 1997, Snowmass, Colorado. "Cetacean habitat associations in the northern Gulf of Mexico." Co-author (Poster, Abstract).
- 1997 The Sixteenth Annual Gulf of Mexico Information Transfer Meeting, 10-12 December 1996. U.S. Dept. of the Interior, Minerals Management Service, New Orleans, LA. "Distribution and abundance of marine mammals in the northern Gulf of Mexico: Goals for the GulfCet II program." (Oral presentation, Proceedings).
- 1996 ICES/JNCC/Seabird Group Symposium Seabirds in the Marine Environment, Glasgow, Scotland. "Distribution of Seabirds in the Northern Gulf of Mexico in Relation to Physical Features." Co-author (Poster, Abstract and Proceedings).
- 1996 Fifth European Conference on Wildlife Telemetry, Strasbourg, France. "A Video System and Three-dimensional Recorder for Marine Mammals: Using Virtual Reality to Study Diving Behavior." (Oral presentation, Abstract).
- 1996 Federation of American Societies for Experimental Biology, Washington, D.C. "Mitochondrial Densities of Skeletal Muscle in Pinnipeds: Evidence for Symmorphosis in Diving." Co-author (Poster, Abstract).
- 1996 International Symposium and Workshop on Otariid Reproductive Strategies and Conservation, National Zoological Park, Smithsonian Institution, Washington, D.C. "Indices of reproductive effort, body condition and pup growth for Steller sea lions (*Eumetopias jubatus*) in Alaska." (Oral presentation, Abstract)
- 1996 International Symposium and Workshop on Otariid Reproductive Strategies and Conservation, National Zoological Park, Smithsonian Institution, Washington, D.C. "Comparisons of milk composition and intake rates for Steller sea lion pups in areas of stable and declining population." Co-author. (Poster with Abstract).
- 1996 International Symposium and Workshop on Otariid Reproductive Strategies and Conservation, National Zoological Park, Smithsonian Institution, Washington,

D.C. "Comparison of Steller sea lion pup growth between declining and stable populations." Co-author. (Poster with Abstract).

- 1996 Fifteenth Annual Gulf of Mexico Information Transfer Meeting. U.S. Dept. of the Interior, Minerals Management Service, New Orleans, LA. "Distribution and abundance of cetaceans in the north-central and western Gulf of Mexico." (Oral presentation, Proceedings).
- 1995 Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL. "Cetacean-Habitat Partitioning Along the Continental Slope in the Northern Gulf of Mexico." (Oral presentation, Abstract).
- 1995 Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL. "Mitochondrial Densities of Skeletal Muscles in Pinnipeds: A Key to Aerobic Capacity." Co-author. (Oral presentation, Abstract).
- 1995 Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL. "Diving Behavior and Movement Patterns of an Atlantic Spotted Dolphin (*Stenella frontalis*) Obtained by Satellite Telemetry." Co-author. (Oral presentation, Abstract).
- 1995 Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL. "Foraging Trip Duration in Lactating Steller Sea Lions as an Index of Foraging Effort." Co-author. (Poster with Abstract).
- 1995 Eleventh Biennial Conference on the Biology of Marine Mammals, Orlando, FL. "Milk Composition and Intake Rates for Steller Sea Lion Pups." Co-author. (Poster with Abstract).
- 1994 Thirteenth Annual Gulf of Mexico Information Transfer Meeting, 14-16 December
 1993. U.S. Dept. of the Interior, Minerals Management Service, New Orleans,
 LA. "Distribution and abundance of marine mammals in the north-central and
 western Gulf of Mexico: The GulfCet Program." (Oral presentation, Proceedings)
- 1994 Gulf of Mexico Symposium. Corpus Christi, TX. "Distribution and Habitat of Cetaceans of the Northern Gulf of Mexico." (Oral presentation, Abstract).
- 1994 American Physiological Society Intersociety Meeting: Regulation, Integration, Adaptation: A Species Approach. San Diego, CA. "Marine Mammal Athletes: Models for Functional Diversity in Mammalian Locomotion Systems." Co-author. (Oral presentation, Abstract).
- 1993 Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX. "Observing the Underwater Behavior or Elephant Seals at Sea by Attaching a Small Video Camera to their Backs." (Oral presentation, Abstract).
- 1993 Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX. "Habitat Preferences of Sperm Whales and Four Species of Dolphins Along the Continental Slope in the Gulf of Mexico." (Oral presentation, Abstract).
- 1993 Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX. "Female Foraging Trip Duration and Rate of Pup Growth: Indices of Reproductive Effort for Steller Sea Lions in Alaska." (Poster, Abstract).
- 1993 Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX. "Movements and Behavior of Satellite Tagged Spotted Seals in the Bering and Chukchi Seas." Co-author. (Oral presentation, Abstract).

- 1993 Tenth Biennial Conference on the Biology of Marine Mammals, Galveston, TX. "The Relationship between Body Condition and Thermoregulatory Costs in Steller Sea Lion Pups." Co-author (Oral presentation, Abstract).
- 1993 *Exxon Valdez* Oil Spill Symposium. Anchorage, Alaska. "Rehabilitating Oiled Sea Otters and Other Fur-bearing Marine Mammals: Lessons from the Valdez Oil Spill." A symposium sponsored by NOAA's Office of Oil Spill Damage Assessment and Restoration. (Oral presentation, Abstract).
- 1992 The Biology of Marine Mammals. San Clemente del Tuyu, Argentina. "Anatomical and physiological adaptations for diving in marine mammals: optimizing underwater foraging." A symposium sponsored by the Foundation Mundo Marino. Invited speaker. (Abstract).
- 1992 The Biology of Marine Mammals. San Clemente del Tuyu, Argentina. "Using satellite telemetry to study the at-sea behavior of spotted seals." A symposium sponsored by the Foundation Mundo Marino. Invited speaker. (Abstract).
- 1992 American Physiological Society: The Physiology of Exercise. Colorado Springs, Colorado. "Effect of water temperature on the swimming energetics of sea lions." (Oral presentation, Abstract).
- 1992 Recent Advances in Marine Mammal Science. London, England. "Role of Plasma and Tissue Lipids in the Energy Metabolism of the Harbor Seal." A symposium sponsored by the Zoological Society of London. Invited speaker. (Oral presentation, Abstract).
- 1991 Mechanics and Physiology of Animal Swimming. Plymouth, England. "Fuel Homeostasis in the Harbor Seal during Submerged Swimming." A symposium sponsored by the Marine Biological Association and the Society for Experimental Biology Biomechanics Group. Invited speaker. (Oral presentation, Abstract).
- 1991 Ninth Biennial Conference on the Biology of Marine Mammals, Chicago, IL. "Diving Behavior of Spotted Seals Along the Northwest Coast of Alaska." (Oral presentation, Abstract).
- 1991 Ninth Biennial Conference on the Biology of Marine Mammals, Chicago, IL. "Thermoregulation in pinnipeds: the heat recycling sea lion." Co-author. (Poster with Abstract).
- 1991 International Oil Spill Conference. San Diego, CA. "Rehabilitation of Oiled Furbearing Marine Mammals." (Oral presentation)
- 1990 The Effects of Oil on Wildlife. Herndon, VA. "Advances in Rehabilitating Oiled Sea Otters: The Valdez Experience." A special symposium held in conjunction with the 13th Annual Conference of the International Wildlife Rehabilitation Council. Invited speaker. (Oral presentation, Proceedings).
- 1990 Sea Otter Symposium Following the T/V Exxon Valdez Oil Spill. Anchorage, AK. "History of the Sea Otter Rehabilitation Centers" and "Valdez Otter Rehabilitation Center". (Oral presentation, Proceedings).
- 1989 Eighth Biennial Conference on the Biology of Marine Mammals, Asilomar, CA. "Rehabilitating oiled sea otters following the Exxon Valdez oil spill." (Oral presentation, Abstract).

- 1989 National Institute of Environmental and Health Safety Symposium on the Alaskan Oil Spill and Human Health. Seattle, Washington. "Rehabilitating Oiled Sea Otters: Lessons from the Exxon Valdez Spill." (Oral presentation, Abstract).
- 1989 International Congress of Physiological Sciences 26th Meeting, Helsinki, Finland. "Fuel Homeostasis in the Harbor Seal During Submerged Swimming". (Poster, Abstract).
- 1989 Annual Meeting of the Animal Behavior Society, Highland Heights, KY. "A comparison of ringed seal (<u>Phoca hispida</u>) and Weddell seal (<u>Leptonychotes weddellii</u>) under-ice movements and hole-finding behavior." Co-author. (Oral presentation, Abstract).
- 1989 European Conference on Clinical Hemorheology, Frankfurt, FRG. "Blood rheology in Weddell seals: hemorheological 'abnormalities' in healthy mammals." Co-author. (Oral presentation, Abstract)
- 1988 First International Conference on Penguins, Dunedin, New Zealand. "Energy Budgets and Foraging Behaviour of Free-ranging <u>Pygoscelis</u> and <u>Eudyptes</u> penguins." Invited speaker. (Oral presentation, Proceedings).
- 1988 Fifth SCAR Symposium on Antarctic Biology, Hobart, Australia. "Intra-Annual Variations in Energy Consumption by Gentoo and Macaroni Penguins at South Georgia." (Oral presentation, Proceedings).
- 1988 American Heart Association. 1988 Annual Meeting. "Sudden Death Associated with Hypercholesterolemia and Severe Atherosclerosis in a 15 Month Old Harbor Seal." (Poster, Abstract).
- 1988 Federation of American Societies for Experimental Biology. 72nd Meeting. "The Dissociation Curve of the Harbor Seal." Co-author. (Poster, Abstract).
- 1987 American Society for the Study of Arteriosclerosis 4lst Meeting. "Apolipoprotein E Deficiency in Harbor Seals and Sea Lions." Co-author. (Poster, Proceedings).
- 1987 Acoustical Society of America, Miami, Florida. "Using Sounds to Control the Movements of Sea Otters." (Oral presentation, Abstract).
- 1987 Second Workshop on Pinniped Energetics, Miami, Florida. "Analysis of Lipoproteins in Marine Mammals." Invited speaker. (Oral presentation, Abstract).
- 1987 Seventh Biennial Conference on the Biology of Marine Mammals, Miami, Florida. "The Cochlear Anatomy of the Sea Otter (<u>Enhydra lutris</u>)." Co-author. (Oral presentation, Abstract).
- 1986 Pinniped Energetics Symposium, Vancouver, Canada. "Assessment of nonsteady state fuel homeostasis using continuous infusion and multicompartment models." Invited speaker. (Oral presentation, Proceedings published in <u>Marine</u> <u>Mammal Bioenergetics</u>, University of California Press).
- 1985 Sixth Biennial Conference on the Biology of Marine Mammals, Vancouver, Canada. "Lactate, glucose and free-fatty acid metabolism in swimming harbor seals, (<u>Phoca vitulina</u>)" (Oral presentation, Abstract).
- 1983 Fifth Biennial Conference of the Biology of Marine Mammals, Boston, Massachusetts. "Swimming metabolism in yearling and adult harbor seals (<u>Phoca vitulina</u>)" (Oral presentation, Abstract).

- 1983 International Union Physiological Sciences Satellite Symposium on Breathhold Diving and Asphyxia, Port Stephens, Australia. "Splanchnic perfusion and function during voluntary dives in Weddell seals. (Oral presentation, Abstract).
- 1983 International Congress of Physiological Sciences 24th meeting, Sydney, Australia. "Water flux and estimated metabolism of free-ranging gentoo and macaroni penguins at South Georgia. (Poster, Abstract).
- 1982 Marine Mammals: An Environmental Symposium for Teachers. Scripps Institution of Oceanography, San Diego. "The diving behavior and ecology of Weddell seals". Invited speaker. (Oral presentation, Session Chairman)
- 1980 American Physiological Society 31st Annual Meeting, Toronto, Canada. "Lactate and glucose metabolism during diving and recovery in harbor seals (<u>Phoca vitulina</u>)". (Poster, Abstract).
- 1979 Third Biennial Conference of the Biology of Marine Mammals, Seattle, Washington. "Diving energetics and intermediary metabolism in harbor seal (<u>Phoca vitulina</u>)". (Oral presentation, Abstract).
- 1979 Capture Myopathy Workshop, Southwest Fisheries Center, La Jolla, California. "The Metabolism of Free-ranging Seals". National Marine Fisheries Administrative Report LJ-79-28. (Oral presentation, Abstract).