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Education:

PhD, Biology 1996
University of California
Los Angeles

MA, Marine Biology 1976
California State University
Long Beach

BA, Biology 1969
California Lutheran University
Thousand Oaks

Affiliations and panel experience:

Member: Pacific Fishery Management Council's Highly Migratory Species Advisory Subpanel; **Representative:** California Cooperative Oceanic Fisheries Investigations (CalCOFI) committee; **Representative:** Pacific Scientific Review Group (advising Secretary of Commerce on marine mammals in the Pacific); **Member:** Pacific Drift Gillnet Take Reduction Team; **Member:** Congressional pinniped/salmon interaction working group; **Co-chair:** Pacific Fishery Management Council's CPS fishery management plan development team; **Chair:** Pacific Fishery Management Council's Coastal Pelagic Fisheries Management team; **Member:** Congressional National Ecosystem Principles Panel; **Representative:** Mexus-Pacifico; **Advisor:** United Nations Food and Agricultural Organization on shark fisheries management; **Member:** marine mammal society; Associate **Editor:** *California Fish and Game* quarterly periodical; Journal **Referee:** *Fisheries Bulletin*, *Marine Mammal Science*, *Fisheries Oceanography*, International Whaling Commission *Special Reports*, and *CalCOFI Fisheries Investigations Reports*; Research and Grant **Reviewer:** California Sea Grant, Saltonstall-Kennedy, and City of San Diego; **Court-recognized Expert witness:** on retainer City of San Diego. **Member:** Scientific Advisory Team, State of California MLPA initiative.

Professional Experience:

Hanan & Associates, Inc.
President/ Chief Scientist
2001-Present

HDR Engineering, Inc.
Director Marine Coastal Program
Senior Biologist/Project Manager
2000-2001

California Dept of Fish and Game
Senior Marine Biologist, Supervisor
Pelagic Ecosystems 1993-2000
Associate Marine Biologist
Marine Mammals 1983-1993
Assistant Marine Biologist
Fisheries Analyses 1979-1983
Assistant Marine Biologist
Kelp Bed Ecosystem 1974-1979

California State Univ. Long Beach
Part-time Faculty
Invertebrate Zoology 1975-1976
Teaching Assistant
Vertebrate Zoology 1973-1975
Graduate Assistant
Biology 1972-1975
Teaching Assistant
General Biology 1973-1975

PVSD, Camarillo, CA
Teacher
Biology/Science 1969-1973

USMCR 1969-1975
Sergeant E-6 Honorable discharge

Personal **publication history** includes 27 peer-reviewed papers and 60+ contract or administrative reports.

Dissertation: Dynamics of abundance and distribution in the Pacific harbor seal, *Phoca vitulina richardsi*, on the coast of California

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Doyle Hanan formed and is president of Hanan & Associates, Inc. a marine consulting firm providing expertise to fisheries and wildlife agencies, municipalities, and foundations. After an early retirement as a senior marine biologist supervisor for California Department of Fish and Game, he was employed as marine director for HDR Engineering, Inc. At CDFG, he directed and participated in research teams investigating nearshore and offshore fisheries, as well as, marine mammals, invertebrates and plants. His projects focused on marine ecosystems and population biology; development and implementation of fishery management plans (white seabass plan, CPS plan, market squid plan); applied research, and fisheries analysis. He designed and implemented observer programs for the shark/swordfish drift gillnet fishery, the nearshore setnet fisheries, salmon troll fishery, and CPFV fishery. He was the state=s voting member of California Cooperative Oceanic Fisheries Investigations (CalCOFI). He was selected to serve on two standing committees to advise the Secretary of Commerce: 1) Pacific Scientific Review Group which reviews all marine mammal stocks, research, and fisheries interactions in the Pacific Ocean; and 2) Drift Gillnet/Pacific Cetacean Take Reduction Team which was charged with developing overseeing a plan to reduce marine mammal bycatch in this fishery. The plan did effect an 80% reduction in this bycatch. He served on the National Ecosystem Principles Panel commissioned by Congress through the Sustainable Fisheries Act to develop recommendations expanding the application of ecosystem principles in fishery conservation and management activities. He participated in the working and contributing groups for the Report to Congress on Salmon-Pinniped and Greater Ecosystem Interactions commissioned by Congress in the reauthorization of the Marine Mammal Protection Act. For PFMC, he was co-chair of the CPS FMP development team and chair of the CPS management team that developed, wrote, and implemented the CPS FMP. He served recently on the PFMC Highly Migratory Species Advisory Sub panel. H&A, Inc. has contracts with National Marine Fisheries Service, Pacific States Marine Fisheries Commission, Gulf & South Atlantic Fisheries Foundation, Inc., the City of San Diego, and the California Wetfish Producers Association. Projects include fish, fisheries, and marine mammal research and consulting. He recently served on the MLPA scientific advisory team for the State of California.

Doyle A. Hanan, PhD.

Selected Publication List:

Hanan, D. A., 2007. Utilizing Commercial Passenger Fishing Vessels to Catch and Tag Nearshore Groundfish. Final Report for PSMFC Contract No. 05-76 Job Number 577.05 as amended April 21, 2005. California Groundfish Disaster Response Program. Available from: Pacific States Marine Fisheries Commission, 205 SE Spokane St, Suite 100. Portland, Oregon 97202-6413. February 12, 2007. 14 pages.

Hanan, D. A., and Pleschner-Steel, D. 2006. Market Squid Industry-Agency Cooperative Research and Biological Observations. Poster presented at California and the World Ocean '06. Long Beach, CA. September 17-20, 2006.

Hanan, D. A., 2006. Utilizing Commercial Passenger Fishing Vessels to Catch and Tag Nearshore Groundfish. Final Report for PSMFC Contract No. 05-23. West Coast Cooperative Research Program. Available from: Pacific States Marine Fisheries Commission, 205 SE Spokane St, Suite 100. Portland, Oregon 97202-6413. January 31, 2006. 10 pages.

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Hester, F., R. Hudson, and D. Hanan. 2005. "Southeastern U.S. Commercial Shark Fishery Stock Assessment and Fishery Management Policy Analysis." Final rpt. presented to Gulf and South Atlantic Fisheries Foundation, Inc. August 5, 2005 Cooperative Agreement No. NA 17FD Contract No. 84-04-2800/6000. 78 pages.

Hanan, D. A. 2005. Correction factors for aerial counts of molting Pacific harbor seals (*Phoca vitulina richardsi*) in California. Final report to Pacific States Marine Fisheries Commission In fulfillment of PSMFC Contract Number 04-41. March 31, 2005. 18 pages.

Hanan, D. A., and G. S. Campbell. 2005. Recommendations for U.S. West Coast Highly Migratory Species Observer Programs with Options for Levels of Significance. Final Rpt. Service Order No. 40JGNF20063. Submitted to USDOC NOAA/NMFS SWFSC. February 2005. 115 pages.

Hanan, D. A., 2004. Biological Letter Report and Recommendations for Construction, Regarding Pinniped Surveys at Children's Pool, La Jolla, California. Final report submitted to the City of San Diego, California. In Partial Fulfillment of Fixed Fee Agreement C-12438 for *Children's Pool Lifeguard Tower*. 27 pages.

Hanan, D. A., 2004. Utilizing Commercial Passenger Fishing Vessels to Catch and Tag Nearshore Groundfish. Final Report for PSMFC Contract No. 03-03. Collaborative Groundfish Data Collection, California Groundfish Disaster Response Program. Available from: Pacific States Marine Fisheries Commission, 205 SE Spokane St, Suite 100. Portland, Oregon 97202-6413. 9 pages

Hanan, D. A., 2004. Marine Mammals and Turtles. Chapters 3 & 4 in the Pacific Coast Groundfish Fishery Management Plan Bycatch Mitigation Program: Draft Programmatic Environmental Impact Statement. NMFS Northwest Region, Seattle, February 2004.

Hanan, D. A., 2004. Economic Impacts Associated with the Expanding California Sea Lion Populations. Final Report Submitted to Fisherman's Alliance of California and Sportfishing Association of California. March 15, 2004. 21 pages.

Hanan, D. A., 2003. Economic Impacts Associated with the Expanding California Sea Lion Population. Written Testimony of Dr. Doyle A. Hanan before the U.S. House of Representatives, Subcommittee on Fisheries Conservation, Wildlife and Oceans. August 19, 2003.
<http://resourcescommittee.house.gov/108cong/fish/2003aug19/hanan.htm>.

R. N. Fraker, D. A. Hanan, and M. A. Fraker. 2002. Tyco Global Network, TransPacific Cable Installation, Marine Wildlife Monitoring Report. Tyco Networks (US) Inc. Morristown, New Jersey. December 2002. TerraMar Environmental Research LL. Ashland, Oregon USA 97520.

Hanan, D. A. 2002. California Sea Lion Interactions with Live Bait Receivers; Initial Investigation into Problems, Impacts, and Solutions. Final Rpt. Service Order No. 40ABNF101546. Submitted to USDOC NOAA/NMFS SWR, August 2002. 43 pages.

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Hanan, D., M. Larson, M. Horeczko, M. Ellsworth, A. Vejar, C. Valle, C. Chan, L. Laughlin, S. Croke, M. Fluharty, T. Barnes, C. Pattison, C. Dawson, D. Aseltine-Neilson. 2001. *White Seabass Fishery Management Plan (WSFMP)*. California Department of Fish and Game, Marine Region. 134 pages.

Hanan, D., J. Sisson revised by Robert Read and Carrie Wilson. 2001. Marine mammal resources: pinnipeds. Pages 523-528 in *California's living marine resources: a status report*. W. S. Leet, C. M. Dewees, Richard Kllingbeil and Eric J. Larson (eds.) University of California. Agriculture and Natural Resources Publication SG01-11. December 2001.

Hanan, D. A. 2000. Overview of coastal pelagic species fisheries management plan. Pages 103-106. In *Proceedings of the Sardine Symposium 2000*. May 23-25, 2000: Held at the Scripps Institution of Oceanography and the National Marine Fisheries Service's Southwest Fisheries Science Center La Jolla, California. S. Phillips (ed.). Pacific States Fisheries Commission. 45 SE 82nd Drive, Suite 100, Gladstone, Oregon 97027-2522.

Hanan, D. A. 1999. Pacific harbor seals. *Alolkoy*. Pinnipeds in CINMS. Channel Islands Marine Sanctuary Foundation. 12(2) 11 pages.

Fluharty, D., P. Aparicio, C. Blackburn, G. Boehlert, F. Coleman, P. Conkling, R. Costanza, P. Dayton, R. Francis, D. Hanan, K. Hinmam, E. Houde, J. Kitchell, R. Langton, J. Lubchenco, M. Mangel, R. Nelson, V. O'Connell, M. Orbach, and M. Sissenwine. 1999. *Ecosystem-based fishery management: a report to Congress by the ecosystem principles advisory panel*. U.S. Department of Commerce. NOAA/NMFS. 54 pages.

Bargmann, G., D. A. Hanan, S. F. Herrick, K. T. Hill, L. D. Jacobson, J. Morgan, R. Parrish, J. Spratt, and J. Walker. 1998. Pacific Fishery Management Council (PFMC). Amendment 8. The coastal pelagic fishery management plan. Pacific Fishery Management Council, Portland, OR. 442 pages.

Hill, K.T., M. Yaremko, L.D. Jacobson, N.C.-H. Lo and D. A. Hanan. 1998. Stock assessment and management recommendations for Pacific sardine (*Sardinops sagax*) in 1997. California Department of Fish and Game, Marine Region Admin. Rpt. 53 pages.

NMFS. 1997. Investigation of scientific information on the impacts of California sea lions and harbor seals on salmonids and on the coastal ecosystems of Washington, Oregon, and California. U.S. Department of Commerce. NOAA Tech. Memo. NMFS/NWFSC-28, 172 Pages.

NMFS-PSMFC. 1997. Report to Congress. Results of discussions between National Marine Fisheries Service and Pacific States Marine Fisheries Commission on behalf of the States of Washington, Oregon, and California regarding recommendations for addressing the impacts of California sea lions and Pacific harbor seals on salmonids and west coast ecosystems

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Hanan, D. A. and M. J. Fluharty. 1997. Sea lion interactions in the commercial salmon troll and commercial passenger fishing vessel fisheries. Pages 116-123 in G. Stone, J. Goebel, and S. Webster (eds.) *Pinniped populations, eastern North Pacific: status, trends, and issues*. A symposium of the American Fisheries Society 127th annual meeting. August 28, 1997. New England Aquarium and Monterey Bay Aquarium. Conservation Department. Central Wharf, Boston, MA 02110.

Hanan, D. A., 1996. Dynamics of abundance and distribution in the Pacific harbor seal, *Phoca vitulina richardsi*, on the coast of California. Doctor of Philosophy dissertation. University of California, Los Angeles. 173 pages.

Beeson, M. J. and D. A. Hanan. 1996. An evaluation of pinniped-fishery interactions in California. Final report to Pacific States Marine Fisheries Commission. Contract number 95-95. 46 pages.

Barnes, J.T., D.A. Hanan, S. Herrick, L.D. Jacobson, E. Konno, C. Thomson, J. Weinstein, and P. Wolf. 1996. Pacific Fishery Management Council (PFMC). Amendment 7. The northern anchovy fishery management plan. Pacific Fishery Management Council, Portland, OR. 324 pages.

Barnes, J. T., M. Yaremko, and D. A. Hanan. 1996. Status of the Pacific sardine resource and fishery. Calif. Dept. Fish Game, MRD Admin. Rpt. 96-1. 22 pages.

F. Henry and D. Hanan, eds. 1996. Review of some California fisheries for 1996, Calif. Coop. Oceanic Fish. Invest. Rep. 38: II.

Beeson, M. J. and D. A. Hanan. 1995. Wary seals challenge researchers. *Outdoor Calif.* 56(1):6-10.

Barnes, J.T. and D. A. Hanan. 1995. Status of the Pacific mackerel resource and fishery, 1994 and 1995. Calif. Dept. Fish Game, MRD Admin. Rpt. 95-04. 20 pages.

Barlow, J., and D. A. Hanan. 1995. An assessment of the status of harbor porpoise in central California. *Rep. International Whaling Commission (Special issue on porpoises)*. 31 pages.

Barnes, J. T. and D. A. Hanan. 1995. Status of the Pacific mackerel resource and fishery, 1994 and 1995. Calif. Dept. Fish Game, MRD Admin. Rpt. 95-04. 20 pages.

Barlow, J., R. W. Baird, J. E. Heyning, K. Wynne, A. M. Manville II, L. F. Lowry, D. Hanan, J. Sease, V. Burkanov. 1994. A review of cetacean mortality in coastal fisheries along the west coast of the U.S., Canada, and the east coast of the USSR. *Rep. International Whaling Commission (Special Issue 15)*. 51 pages.

Barnes, J. T., and D. A. Hanan. 1994. Status of the Pacific sardine resource and fishery, 1994 and 1995. Rep. to legislature. Calif. Dept. Fish and Game. Submitted December 1994. 8 pages.

Beeson, M. J. and D. A. Hanan. 1994. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1994. Final Rpt. Cooperative agreement No. NA37FX0265. Submitted NOAA/NMFS SWR, November 1994. 68 pages.

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Hanan, D. A. and M. J. Beeson. 1994. Harbor seal, *Phoca vitulina richardsi*, pupping season census in California, April 1993. Final Rpt. Cooperative agreement No. NA27FX0273-01. Submitted NOAA/NMFS SWR, February 1994. 6 pages.

Hanan, D. A. and M. J. Beeson. 1994. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1993. Final Rpt. Cooperative agreement No. NA27FX0273-01. Submitted NOAA/NMFS SWR, January 1994. 61 pages.

Hanan, D. A., D. B. Holts, and A. L. Coan. 1993. The California drift gill net fishery for sharks and swordfish, 1981-82 through 1990-91. Calif. Dept. Fish and Game, *Fish Bull.* 175., 95 pages.

Hanan, D. A. 1993. Status of the Pacific harbor seal population on the coast of California in 1992. Final report. Presented in partial fulfillment of cooperative agreement NOS. NA89AB-H-MM036 and NA86-ABD-00201 at the Pinniped Assessment Workshop, April 27 - 30, 1992, Southwest Fisheries Science Center, La Jolla, California. 22 pages.

Beeson, M. J. and D. A. Hanan. 1993. Effort estimates of California gill net fisheries: halibut-angel shark set net, shark-swordfish drift net, and white seabass-yellowtail set and drift net for the 1992 calendar year (January 1st - December 31st, 1992). Final Rpt. Cooperative agreement No. NA27FX0273-01. Submitted NOAA/NMFS SWR, June 1993, 10 pages.

Hanan, D. A., L. M. Jones, and M. J. Beeson. 1993. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1992. Final Rpt. Cooperative agreement No. NA17FX0304-01. Submitted NOAA/NMFS SWR, January 1993. 53 pages.

Hanan, D. A., D. B. Holts, and A. L. Coan. 1992. The California drift gill net fishery, 1981-82 through 1990-91. Page 11 in Proc. 43rd annual tuna conf. Fisheries and ecological interactions. Presented May 18, 1992. A. L. Coan and A. R. Jackson (eds.) U.S. DOC/NOAA/NMFS SWFSC, La Jolla, CA 56 pages.

Hanan, D., and J. Sisson. 1992. Marine mammal resources: pinnipeds. Pages 208-211 in California's living marine resources and their utilization. W. S. Leet, C. M. Dewees, and C. W. Haugen (eds.) Sea grant extension publication. UCSGEP-92-12.

Hanan, D. A., L. M. Jones, and M. J. Beeson. 1992. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1991. NOAA/NMFS SWFC Admin. Rpt. LJ-92-03. January 1992. 68 pages.

Forney, K. A., D. A. Hanan, and J. Barlow. 1991. Detecting trends in harbor porpoise abundance from aerial survey data using analysis of covariance. *Fish. Bull.*, U.S. 89(3):367-377.

Hanan, D. A., E. S. Konno, and M. J. Beeson. 1991. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1990. NOAA/NMFS SWFC Admin. Rpt. LJ-91-05. March 1991. 68 pages.

Hanan, D. A., 1990. Harbor seal, *Phoca vitulina richardsi*, census in California, 1989. NOAA/NMFS SWFC Admin. Rpt. LJ-90-10. April 1990. 63 pages.

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- Hanan, D. A., 1989. Harbor porpoise, *Phocoena phocoena*, aerial surveys, September 1988 to November 1988. Final Rpt. Cooperative agreement No. NA-86-ABH-00018. Submitted NOAA/NMFS SWR, March 1989. 30 pages.
- Hanan, D. A., L. M. Jones, and R. B. Read. 1989. California sea lion interaction and depredation rates with the commercial passenger fishing vessel fleet near San Diego. *California Cooperative Oceanic Fisheries Investigations Reports*. 30:122-126.
- Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1989. Harbor seal, *Phoca vitulina richardsi*, census in California, May-June 1988. January 1989. NOAA/NMFS SWFC Admin. Rpt. LJ-89-13. 53 pages.
- Boveng, P. L., A. A. Hohn, D. P. DeMaster, A. E. Dizon, D. A. Hanan, and J. P. Scholl. 1989. Tracking harbor seals in Southern California. *Proc. 1989 North Amer. Argos users conf. and exhibit*. Service Argos, Inc. 1801 McCormick Dr., Suite 10, Landover, Md. 20785. pp 205-217.
- Forney, K. A., D. A. Hanan, J. Barlow. 1989. Detecting trends in Harbor porpoise abundance using aerial surveys: a preliminary report based on three years. August 1989. NOAA/NMFS SWFC Admin. Rpt. SWR-89-20, 17 pages.
- Hanan, D. A., and S. L. Diamond. 1989. Estimates of sea lion, harbor seal, and harbor porpoise mortalities in California set net fisheries for the 1986-87 fishing year. Final Rpt. Cooperative agreement No. NA-86-ABH-00018. NOAA/NMFS SWR, January 1989. 10 pages.
- Hedgecock, D., E. S. Hutchinson, G. Li, N. C. H. Lo, and D. A. Hanan. 1989. Genetic and morphometric variation in the Pacific sardine, *Sardinops sagax caerulea*: comparisons and contrasts with historical data and with variability in the northern anchovy, *Engraulis mordax*. *Fish. Bull.*, U.S. 87:653-671.
- Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1988. Estimates of sea lion and harbor seal mortalities in California set net fisheries for 1983, 1984, and 1985. Final Rpt. Cooperative agreement No. NA-86-ABH-00018. NOAA/NMFS SWR October 1988. 10 pages.
- Hanan, D. A., and L. M. Jones. 1988. Harbor porpoise, *Phocoena phocoena*, aerial surveys, October 26, 1987 to November 20, 1987. Final Rpt. Cooperative agreement No. NA-86-ABH-00018. NOAA/NMFS SWR, January 1988. 29 pages.
- Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1988. Harbor seal, *Phoca vitulina richardsi*, census in California, May - June 1987. NOAA/NMFS SWR Admin. Rpt. SWR-88-2, 41 pages.
- Herrick, S. F., Jr., and D. Hanan. 1988. A review of California entangling net fisheries, 1981-1986. US Dep. Com. NOAA Tech. Memoranda No. NOAA-TM-NMFS-SWFC-108, 38 pages.
- Hanan, D. A. 1987. Harbor porpoise, *Phocoena phocoena*, aerial surveys, September 9, 1986 to October 21, 1986. Final Rpt. Cooperative agreement No. NA-86-ABH-00018. Submitted NOAA/NMFS SWR, January 1987. 41 pages.

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Hanan, D. A. and J. P. Scholl. 1987. Acoustic harassment testing in the San Francisco Bay Pacific herring, *Clupea harengus*, gill net and purse seine fisheries. Pages 56-57 in B. R. Mate and J. T. Harvey, eds. *Acoustical deterrents in marine mammal conflicts with fisheries*. Oregon State University. Sea Grant College Program. Publication No. ORESU-W-86-001. 116 pages.

Hanan, D. A. and J. P. Scholl. 1987. Acoustic harassment testing in the Klamath River salmon fishery. Pages 58-64 in B. R. Mate and J. T. Harvey, eds. *Acoustical deterrents in marine mammal conflicts with fisheries*. Oregon State University. Sea Grant College Program. Publication No. ORESU-W-86-001. 116 pages.

Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1987. Harbor seal, *Phoca vitulina richardsi*, census in California, June 2-5, 30, and July 1, 1986. NOAA/NMFS SWR Admin. Rpt. SWR-87-3, 41 pages.

Hanan, D. A., S. L. Diamond, J. P. Scholl. 1987. An estimate of harbor porpoise mortalities in California set net fisheries, April 1, 1985 through March 31, 1986. NOAA/NMFS SWR Admin. Rpt. SWR-87-5, 9 pages.

Diamond, S. L., J. P. Scholl, and D. A. Hanan. 1987. Drift gill net observations for the 1985-86 fishing season. NOAA/NMFS SWR Admin. Rpt. SWR-87-4, 21 pages.

Scholl, J. P., and D. A. Hanan. 1987. Effects of cracker shells on California sea lions, *Zalophus californianus*, interacting with the southern California partyboat fishery. Page 65 in B. R. Mate and J. T. Harvey, eds. *Acoustical deterrents in marine mammal conflicts with fisheries*. Oregon State University. Sea Grant College Program. Publication No. ORESU-W-86-001. 116 pages.

Scholl, J. P. and D. A. Hanan. 1987. Acoustic harassment devices tested in combination with crackershells on pinnipeds interacting with the southern California partyboat fishery. Pages 67-74 in B. R. Mate and J. T. Harvey, eds. *Acoustical deterrents in marine mammal conflicts with fisheries*. Oregon State University. Sea Grant College Program. Publication No. ORESU-W-86-001. 116 pages.

Hanan, D. A., S. L. Diamond, and J. P. Scholl. 1986. Marine mammal/ fisheries interactions: analysis and mitigation in California fisheries. Presented S. Calif. Acad. Sci. Ann. Mtng., San Bernardino, CA, 2-3 May 1986.

Hanan, D. A., 1986. California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1983-June 30, 1984. NOAA/NMFS SWFC Admin. Rpt. LJ-86-16 55 pages.

Hanan, D. A., 1986. California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1984-June 30, 1985. NOAA/NMFS SWFC Admin. Rpt. LJ-86-25C, 46 pages.

Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1986. Harbor seal, *Phoca vitulina richardsi*, census in California, June 25-30, 1984. Pages 2-7 and 38- 53 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1983-June 30, 1984. NOAA/NMFS SWFC Admin. Rpt. LJ-86-16.

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Hanan, D. A., J. P. Scholl, and S. L. Diamond. 1986. Harbor seal *Phoca vitulina richardsi*, census in California, May 28-31 and June 25-30, 1985. Pages 2-8 and 27-44 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1984-June 30, 1985. NOAA/NMFS SWFC Admin. Rpt. LJ-86-25C.

Hanan, D. A., S. L. Diamond, and J. P. Scholl. 1986. An estimate of harbor porpoise mortality in California set net fisheries, April 1, 1984 through March 31, 1985. NOAA/NMFS SWR Admin. Rpt. SWR-86-16, 38 pages.

Diamond S. L., and D. A. Hanan. 1986. An estimate of harbor porpoise mortality in California set net fisheries, April 1, 1983 through March 31, 1984. NOAA/NMFS SWR Admin. Rpt. SWR-86-15, 40 pages.

Diamond, S. L., D. A. Hanan, and J. P. Scholl. 1986. Drift gill net observations for the 1983-84 fishing season. Pages 8-24 and 54-55 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1983-June 30, 1984. NOAA/NMFS SWFC Admin. Rpt. LJ-86-16.

Diamond, S. L., D. A. Hanan, and J. P. Scholl. 1986. Drift gill net observations for the 1984-85 fishing season. Pages 9-26 and 45-46 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1984-June 30, 1985. NOAA/NMFS SWFC Admin. Rpt. LJ-86-25C.

Hanan, D. A., 1985. California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1982-June 30, 1983. NOAA/NMFS SWFC Admin. Rpt. No. LJ-85-10C, 76 pages.

Hanan, D. A. and J. P. Scholl. 1985. Shark drift gill net fishery observation program (May-June, 1983). Pages 10-12 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1982-June 30, 1983. NOAA/NMFS SWFC Admin. Rpt No. LJ-85-10C.

Hanan, D. A., J. P. Scholl, M. J. Herder, and K. M. Waldron. 1985. Harbor seal, *Phoca vitulina richardsi*, censuses in California, April and June, 1983. Pages 2-9 and 52-76 in Doyle A. Hanan, California Department of Fish and Game coastal marine mammal study annual report for the period July 1, 1982-June 30, 1983. NOAA/NMFS SWFC Admin. Rpt. No. LJ-85-10C.

Hanan, D. A., 1984. Analysis of the common thresher shark, *Alopias vulpinus*, in the California bight. NOAA/NMFS SWFC Admin. Rpt. No. LJ-84-10C, 34 pages

Hanan, D. A., 1983. Bluefin tuna in the eastern North Pacific Ocean. *Calif. Coop. Oceanic Fish. Invest. Rep.* 24:97-98.

Hanan, D. A., 1983. Review and analysis of the bluefin tuna fishery in the eastern North Pacific Ocean. *Fish. Bull.*, U.S. 81(1):107-119.

Hanan, D. A., 1981. Proceedings of the 32nd annual tuna conference. NOAA/NMFS SWFC Admin. Rpt. No. LJ-81-29, 43 pages.

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Hanan, D. A., 1981. Update of the estimated mortality rate of *Engraulis mordax* in Southern California. *Calif. Fish and Game*, 67(1):62-65.

Hanan, D. A., 1981. Status report: north Pacific bluefin tuna. Pages 246-245 in World tuna & billfish stocks. US Dep. Com. NOAA Tech. Mem. No. NOAA-TM-NMFS-SWFC-15, pp 246-255.

Hanan, D. A., 1981. An overview of Pacific bluefin tuna and data base description. NOAA/NMFS SWFC Admin. Rpt. No. LJ-81-18C, 135 pages.

Wilson, K. C., P. L. Haaker, and D. A. Hanan. 1979. Restoration of *Macrocystis pyrifera* at Palos Verdes Peninsula, California. Pages 85-90 in Proc. Int. Seaweed Symp. 9: A. Jensen and J.R. Stein (Co-ed.). Science Press, Princeton.

Wilson, K. C., P. L. Haaker, and D. A. Hanan. 1978. Kelp restoration in southern California. Pages 183-202 in The marine plant biomass of the Pacific northwest coast. R. Kraus (ed.). Oregon State University Press, Corvallis.

Mearns, A. J., D. A. Hanan, and L. Harris. 1977. Recovery of kelp forest off Palos Verdes. Pages 99-108 in Annual report, Coastal Water Research Project, El Segundo, California.

Hanan, D. A., 1976. A new species of cyclopoid copepod, parasitic on shinner surfperch, *Cymatogaster aggregata* Gibbons, in Anaheim Bay and Huntington Harbor, Calif. *Bull. So. Cal. Acad. Sci.* 75(1) 22-28.

Hanan, D. A., 1976. Ecological aspects of the ectoparasites found on the surfperch (Embiotocidae) in Anaheim Bay, California. Master of Arts thesis. Calif. State University, Long Beach. 62 pages.