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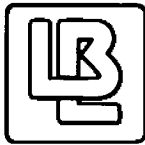
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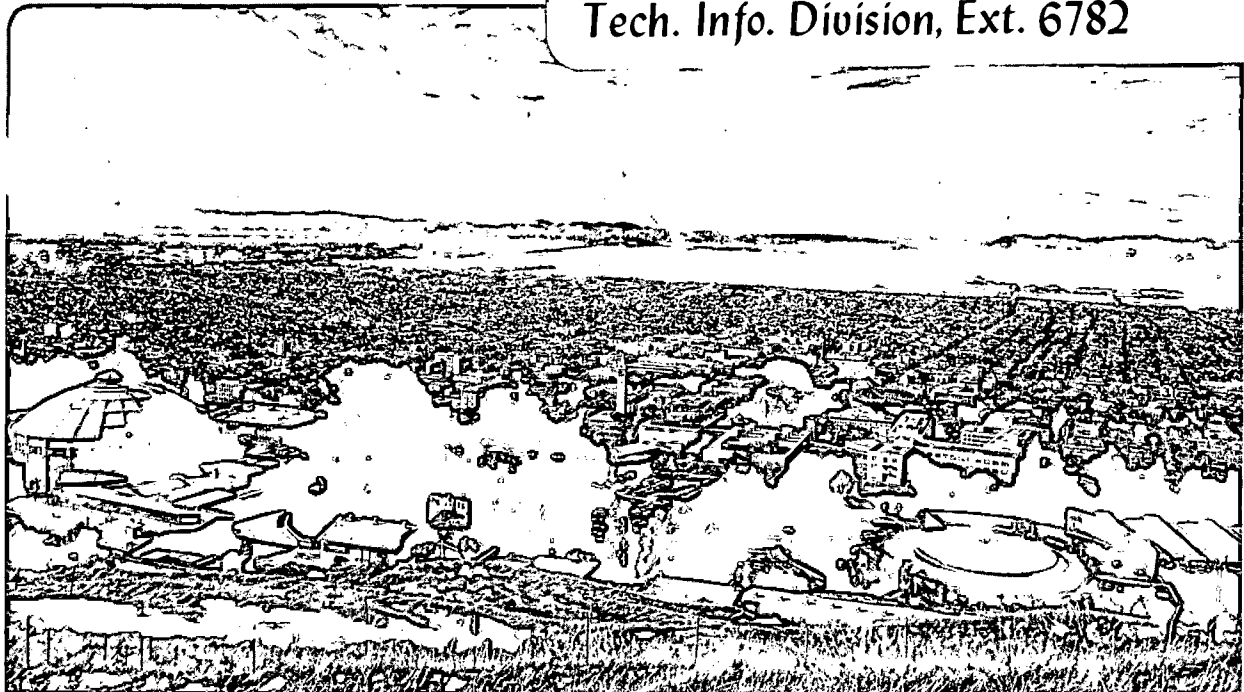
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A BIBLIOGRAPHY OF MARINE TURTLES IN HAWAII

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A BIBLIOGRAPHY OF MARINE TURTLES IN HAWAII

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INTRODUCTION

Information on the organisms at proposed Ocean Thermal Energy Conversion (OTEC) sites is required to assess the potential impacts of OTEC power plant operations. To gather information on the distribution, abundance and biology of organisms known to occur in OTEC regions, the Marine Sciences Group at Lawrence Berkeley Laboratory conducted literature surveys on those organisms. This bibliography is the product of a literature survey on marine turtles at two proposed OTEC sites in Hawaii. The OTEC sites are located off Keahole Point, Hawaii and Kahe Point, Oahu.

The references included in this bibliography provide information on the distribution, ecology and biology of marine turtles in Hawaii. While not all the citations are to studies conducted in the Hawaiian Islands, all contain information on the biology and ecology of sea turtle species which are found in Hawaii.

Five species of marine turtles have been reported near Hawaii: the olive ridley (Lepidochelys olivacea), the loggerhead (Caretta caretta), the hawksbill (Ertmochelys imbricata), the leatherback (Dernochelys coriacea), and the green turtle (Chelonia mydas). The green turtle is the most abundant sea turtle in the Hawaiian Island chain. The hawksbill and the leatherback occur in small numbers, and the olive ridley and the loggerhead are recorded as accidentals.

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REFERENCES

- AMERSON, A.B. (1971) The natural history of French Frigate Shoals, Northwestern Hawaiian Islands. Atoll Research Bulletin, 150, 79-92.
- AMERSON, A.B., R.B. CLAPP and W.V. WIRTZ, II (1974) The natural history of Pearl and Hermes Reef, Northwestern Hawaiian Islands. Atoll Research Bulletin, 174, 1-306. (Reptiles pp.58-67).
- AMERSON, A.B. and P.C. SHELTON (1976) The natural history of Johnston Atoll, central Pacific Ocean. Atoll Research Bulletin, 192, 1-479.
- ANDERSON, P.K. (1958) The photic responses and water-approach behavior of hatchling turtles. Copeia, 1958, 211-215.
- BALAZS, G.H. (1973a) Status of marine turtles in the Hawaiian Islands. Elepaio, Journal of the Hawaiian Audubon Society, 33, 127-130.
- BALAZS, G.H. (1973b) Summary report on the 1973 French Frigate Shoals' green turtle investigations. Hawaii Institute of Marine Biology, unpublished report, December, 35 pp.
- BALAZS, G.H. (1974a) Observations on the basking habits in the captive juvenile Pacific green turtle. Copeia, 1974, 542-544.
- BALAZS, G.H. (1974b) Survival status of the green turtle nesting and basking colony at French Frigate Shoals, Northwestern Hawaiian Islands. American Fisheries Society, 104th Annual Meeting, Honolulu, 8 pp.
- BALAZS, G.H. (1975a) The green turtle (Chelonia spp.) in the Hawaiian archipelago - a case study of an endangered Pacific resource. Pacific Science Association - 13th Pacific Science Congress Record of Proceedings, Vancouver, B.C., vol. 1, p. 115-116, abstract only.
- BALAZS, G.H. (1975b) Green turtles' uncertain future. Defenders, 50 (6), 521-523.
- BALAZS, G.H. (1976a) Green turtle migrations in the Hawaiian Archipelago. Biological Conservation, 9, 125-140.
- BALAZS, G.H. (1976b) Hawaii's seabirds, turtles, and seals. World wide Distributors, Honolulu, 32 pp.

- BALAZS, G.H. (1976c) Marine turtles in the Phoenix Islands. Atoll Research Bulletin, 184, 1-7.
- BALAZS, G.H. (1977) Ecological aspects of green turtles at Necker Island. Hawaii Institute of Marine Biology, unpublished report, October, 27 pp.
- BALAZS, G.H. (1978) Terrestrial critical habitat for sea turtles under United States jurisdiction in the Pacific region - an overview of existing knowledge. Elepaio, Journal of the Hawaiian Audubon Society, 39(4), 37-41.
- BANKS, E. (1937) The breeding of the edible turtle (Chelonia mydas). Sarawak Museum Journal, 4, 523-532.
- BAUR, G. (1890) The genera of Chelonidae. American Naturalist, 24, 486-487.
- BELKIN, D.A. and C. GANS (1968) An unusual Chelonian feeding niche. Ecology, 49, 768-769.
- BOOTH, J. and J.A. PETERS (1972) Behavioral studies on the green turtle (Chelonia mydas) in the sea. Animal Behavior, 20, 808-812.
- BOYER, D.R. (1965) Ecology of the basking habit in turtles. Ecology, 46, 99-118.
- BRYAN, E.H., Jr. (1942) American Polynesia and the Hawaiian chain. Tongg Publishing Co., 253 pp.
- BUGGELN, R.G. (1965) A preliminary list of the algae flora of the Midway Islands. Atoll Research Bulletin, 109, 1-11.
- BUSTARD, H.R. (1967) Mechanism of nocturnal emergence from the nest in green turtle hatchlings. Nature, 214, 317.
- BUSTARD, H.R. (1970) The adaptive significance of coloration in hatchling green sea turtles. Herpetologica, 26, 224-227.
- BUSTARD, H.R. (1971) Temperature and water tolerances of incubating sea turtle eggs. British Journal of Herpetology, 4, 196-198.
- BUSTARD, H.R. (1972) Sea turtles: natural history and conservation, Collins, 220 pp.
- BUSTARD, H.R. (1974a) The green turtle. In: Wildlife '74: the world conservation yearbook, N. SITWELL, editor, London Editions Ltd. pp.80-87.

- BUSTARD, H.R. (1974b) Barrier reef sea turtle populations. Proceedings of the 2nd International Coral Reef Symposium, 1, 227-234.
- BUSTARD, H.R. (1976) Turtles of coral reefs and coral islands. In: Biology and geology of coral reefs, O.A. JONES and R. ENDEAN, editors, Vol.3, Academic Press, pp.343-368.
- BUSTARD, H.R. and P.M. GREENHAM (1968) Physical and chemical factors affecting hatching in the green sea turtle, Chelonia mydas (L.). Ecology, 49, 269-278.
- BUSTARD, H.R. and P.M. GREENHAM (1969) Nesting behavior of the green sea turtle on a Great Barrier Reef island. Herpetologica, 25, 93-102.
- BUSTARD, H.R., K. SIMKISS and N.K. JENKINS (1969) Some analysis of artificially incubated eggs and hatchlings of green and loggerhead sea turtles. Journal of Zoology, London, 158, 311-315.
- BUSTARD, H.R. and K.P. TOGNETTI (1969) Green sea turtles: a discrete simulation of density-dependent population regulation. Science, 163, 939-941.
- CALDWELL, M.C. and D.K. CALDWELL (1962) Factors in the ability of the northeastern Pacific green turtle to orient toward the sea from the land: a possible coordinate in long-range navigation. Los Angeles County Museum Contributions in Science, 60, 1-27.
- CARR, A.F. (1952) Handbook of turtles: the turtles of United States, Canada, and Baja California, Cornell University Press, Comstock Publishing Associates, 542 pp.
- CARR, A.F. (1964) Transoceanic migrations of the green turtle. BioScience, 14, 49-52.
- CARR, A.F. (1965) The navigation of the green turtle. Scientific American, 212, 79-86.
- CARR, A.F. (1967a) Adaptive aspects of the scheduled travel of Chelonia. In: Animal orientation and navigation, P.M. STORM, editor, Oregon State University Press, pp.35-55.
- CARR, A.F. (1967b) So excellent a fishe: a natural history of sea turtles, The American Museum of Natural History, The Natural History Press, 248 pp.
- CARR, A.F. (1967c) 100 turtle eggs. Natural History, 76, 46-51.

- CARR, A.F. (1970) Green sea turtles in peril. National Parks Conservation Magazine, 44(271), 19-24.
- CARR, A.F. and M.H. CARR (1970) Modulated reproductive periodicity in Chelonia. Ecology, 51, 335-337.
- CARR, A.F. and P.J. COLEMAN (1974) Seafloor spreading theory and the odyssey of the green turtle from Brazil to Ascension Island, Central Atlantic. Nature, 249, 128-130.
- CARR, A.F., H. HIRTH and L. OGREN (1966) The ecology and migrations of sea turtles. 6. The hawksbill turtle in the Caribbean. American Museum Novitates, 2248, 1-29.
- CARR, A.F. and L. OGREN (1960) The ecology and migrations of sea turtles. 4. The green turtle in the Caribbean Sea. Bulletin of the American Museum of Natural History, 121(1), 1-48.
- CLAPP, R.B. (1972) The natural history of Gardiner Pinnacles, Northwestern Hawaiian Islands. Atoll Research Bulletin, 163, 1-29.
- CLAPP, R.B. and E. KRIDLER (1977) The natural history of Necker Island, Northwestern Hawaiian Islands. Atoll Research Bulletin, 206, 1-102.
- CLAPP, R.B., E. KRIDLER and R.R. FLEET (1977) The natural history of Nihoa Island, Northwestern Hawaiian Islands. Atoll Research Bulletin, 207, 1-147.
- CLAPP, R.B. and W.O. WIRTZ (1975) The natural history of Lisianski Islands. Atoll Research Bulletin, 186, 154-156.
- COGGER, H.G. and D. LINDNER (1969) Marine turtles in northern Australia. Australian Zoologist, 15, 150-159.
- DANIEL, R.S. and K.U. SMITH (1947) The sea-approach behavior of the neonate loggerhead turtle (Caretta caretta). Journal of Comparative Physiology and Psychology, 40, 413-420.
- EHRENFELD, D.W. (1968) The role of vision in the sea-finding orientation of the green turtle (Chelonia mydas) Animal Behavior, 16, 281-287.
- EHRENFELD, D.W. (1979) Behavior associated with nesting. In: Turtles: perspectives and research, M. HARLESS and H. MORLOCK, editors. Wiley-Interscience Publications, John Wiley and Sons, pp.417-434.

- EHRENFELD, D.W. and A.F. CARR (1967) The role of vision in the sea-finding orientation of the green turtle, Chelonia mydas. Animal Behavior, 15, 25-36.
- ELY, C.A. and R.B. CLAPP (1973) The natural history of Layan Island, Northwestern Hawaiian Islands. Atoll Research Bulletin, 171, 275-279.
- GARMAN, S. (1880) On certain species of Chelonidae. Bulletin of the Museum of Comparative Zoology, Harvard, 6, 123-126.
- HARRISSON, T. (1951) The edible turtle in Borneo. 1. Breeding season. Sarawak Museum Journal, 5, 593-596.
- HARRISSON, T. (1954) The edible turtle (Chelonia mydas) in Borneo. 2. Copulation. Sarawak Museum Journal, 6, 126-128.
- HARRISSON, T. (1956a) The edible turtle (Chelonia mydas) in Borneo. 4. Growing turtles and growing problems. Sarawak Museum Journal, 7, 233-239.
- HARRISSON, T. (1956b) Tagging green turtles, 1951-1956. Nature, 178, 1479.
- HENDRICKSON, J.R. (1958) The green sea turtle, Chelonia mydas (Linn.), in Malaya and Sarawak. Proceedings of the Zoological Society, London, 130, 455-535.
- HENDRICKSON, J.R. (1969) Report on Hawaiian marine turtle populations. In: Marine turtles: proceedings of a working meeting of marine turtle specialists, Morges, Switzerland, International Union for Conservation of Nature and Natural Resources, pp.89-95. IUCN Publications New Series Supplementary Paper No.20.
- HENDRICKSON, J.R. (1972) South Pacific Islands - marine turtle resources. A report prepared for the South Pacific Islands Fisheries Development Agency. FAO, Rome, 15 pp.
- HIRTH, H.F. (1971a) South Pacific Islands - marine turtle resources. In: Marine turtles: proceedings of the 2nd working meeting of marine turtle specialists, 1971 March 8-10, Morges, Switzerland, International Union for Conservation of Nature and Natural Resources, pp.53-56. IUCN Publications New Series Supplementary Paper No.31.
- HIRTH, H.F. (1971b) Synopsis of biological data on the green turtle, Chelonia mydas (Linnaeus, 1758). U.N. Food and Agriculture Organization, Rome, FAO Fisheries Synopsis 85, 74 pp.

- HIRTH, H.F. and A.F. CARR (1970) The green turtle in the Gulf of Aden and the Seychelles Islands. Verhandelingen der Koninklijke Nederlandse Akademie van Wetenschappen, AFD. Natuurkunde TweedeReeks, 58(4), 1-44.
- HUGHES, D.A. and J.D. RICHARD (1974) The nesting of the Pacific ridley Lepidochelys olivacea on Playa Nancite, Costa Rica. Marine Biology, 24, 97-107.
- KOCH, A.L., A.F. CARR and D.W. EHRENFELD (1969) The problem of open sea navigation: the migration of the green turtle to Ascension Island. Journal of Theoretical Biology, 22, 163-179.
- KOWARSKY, J. (1978) Observations on green turtles (Chelonia mydas) in north-eastern Australia during the 1975/76 nesting season. Biological Conservation, 13(1), 51-62.
- LEBUFF, C.R. (1974) Unusual nesting relocation in the loggerhead turtle Caretta caretta. Herpetologica, 30, 29-31.
- MANTON, M.L., A. KARR and D.W. EHRENFELD (1972) Chemoreception in the migratory sea turtle Chelonia mydas. Biology Bulletin, 143, 184-195.
- MCGINNIS, S.M. (1968) Respiration rate and body temperature of the Pacific green turtle, Chelonia mydas agassisi. American Zoologist, 8, 766.
- MOOREHOUSE, F.W. (1933) Notes on the green turtle (Chelonia mydas). Reports of the Great Barrier Reef Committee, 4(1), 1-22.
- MOWBRAY, L.S. (1965) Hawaiian monk seals (Monachus schauinslandi) and green turtles (Chelonia mydas) at Waikiki aquarium. In: International zoo yearbook, C. JARVIS, editor, Vol.5, Zoological Society of London, pp.146-147.
- MROSOVSKY, N. (1968) Nocturnal emergence of hatchling sea turtles and control by thermal inhibition of activity. Nature, 220, 1338-1339.
- MROSOVSKY, N. (1972) The water-finding ability of sea turtles. Behavioral studies and physiological speculations. Brain, Behavior and Evolution, 5, 202-225.
- MROSOVSKY, N. and A.F. CARR (1967) Preference for light of short wavelengths in hatchling green sea turtles, Chelonia mydas, tested on their natural nesting beaches. Behaviour, 28, 217-231.

- MROSOVSKY, N. and P.C.H. PRITCHARD (1971) Body temperatures of Dermochelys coriacea and other sea turtles. Copeia, 1971, 624-631.
- MROSOVSKY, N. and S.J. SHETTLEWORTH (1968) Wavelength preferences and brightness cues in the water-finding behaviour of sea turtles. Behaviour, 32, 211-257.
- MROSOVSKY, N. and S.J. SHETTLEWORTH (in press) Further studies of the sea-finding mechanism in green turtle hatchlings. Behaviour.
- OLIVER, J.A. (1955) The natural history of North American amphibians and reptiles, Van Nostrand, 359 pp.
- PARSONS, J.J. (1962) The green turtle and man. University of Florida Press, 126 pp.
- PRITCHARD, P.C.H. (1967) Living turtles of the world, Crown TFH Publications.
- PRITCHARD, P.C.H. (1973) International migrations of South American sea turtles (Chelonidae and Dermochelidae). Animal Behavior, 21, 18-27.
- PRITCHARD, P.C.H. (1977) Marine turtles of Micronesia. Chelonia Press, 83 pp.
- SOEGIARTO, A. (1973) Benthic algae of the bay. In: Atlas of Kaneohe Bay: a reef ecosystem under stress, S.V. SMITH, K.E. CHAVE and D.T.O. KAM, editors, University of Hawaii, Sea Grant, UNIHI-SEAGRANT-TR-72-01.
- TSUDA, R.T. (1966) Marine benthic algae from the leeward Hawaiian group. Atoll Research Bulletin, 115, 1-13.
- UNITED STATES FISH AND WILDLIFE SERVICE (1978) Endangered and threatened wildlife and plants: Proposed determination of critical habitat for the leatherback sea turtle. Federal Register, 43(57), 12050-12051.
- WIENS, H.J. (1962) Atoll environment and ecology. Yale University Press, 532 pp.
- WOODWARD, P.W. (1972) The natural history of Kure Atoll, Northwestern Hawaiian Islands. Atoll Research Bulletin, 164, 296-298.

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