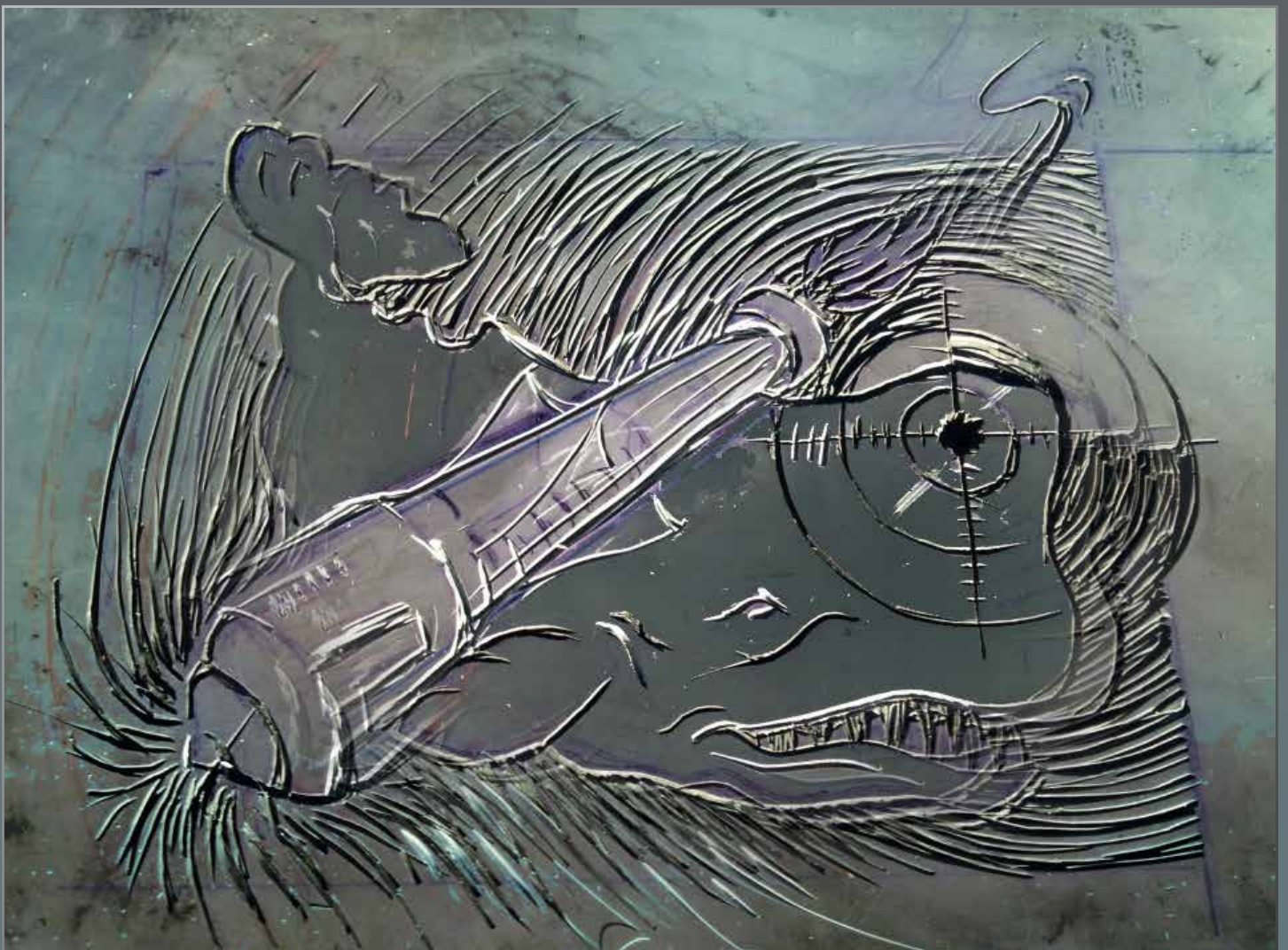


On the Antiquity of Sperm Whales
& Other Odontocetes in the Hawaiian Islands

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A link to the spirituality of ancient Hawaiians lives on in the deep blue waters surrounding our island paradise. Of all the animals, Hawaiians bequeathed the name Palaoa to sperm whales, the largest manifestation of Kanaloa, god of the ocean realm. Whales are kinolau, body forms or manifestations of the god, Kanaloa. Stranded whales were claimed by the chief, and their bodies were used for food and oil. Sperm whale teeth were especially prized, as they provided ivory for the sacred necklace or lei niho palaoa.

Research into Hawaii's history has revealed that sperm whales were once the most common, year-round, large whale in the deeper channels between the islands. Sightings from the mid-1800s include a pod of nearly 100 individuals off the island of Hawaii and another group of 45 which were sighted off Kauai. Sperm whales were also observed closer to shore, including a pod that swam into Kalepolepo Bay and a very large bull was noted at Kealakekua Bay on the Big Island.

The Kumulipo, the Hawaiian birth chant speaks: "born the sperm whale living in the ocean". The Kumulipo also states that certain plants were the protector of the animals, and that sperm whales were "kept by the sandalwood living on the land". When Westerners (Europeans) arrived in the late 1700s, they were adept at exploiting the islands' living wealth including the Sandalwood forests. The Hawaiians logged the Sandalwood forests to feed their trade relationship with the west. As Kumulipo foretold, the loss of sandalwood resulted in the sperm whales no longer being protected, as they became the favored target of the whalers. Similar to other whale populations throughout the world, Hawaiian sperm whales were intensively exploited and their numbers diminished.

The recovery of sperm whales is important, as they can stimulate primary productivity with their iron-rich feces. When they die of natural causes, they sink to the bottom and provide carcasses for unique whale-fall communities. As North Pacific populations steadily recover from whaling, perhaps once again we can celebrate the joy—and ecosystem benefits—of these manifestation of Kanaloa, god of the ocean realm.

Ecological Importance

As apex predators, sperm whales are thought to exert top-down control on pelagic biomass through their predation on large cephalopods (Croll et al 2006). Sperm whales can also induce bottom up regulation by acting as biological pumps via defecation of iron rich excreta into the photic zone (Roman and McCarthy 2010). This stimulation of primary productivity may be particularly critical in oligotrophic waters such as those surrounding Hawaii (Antonelis et al 2007). Further vertical transfer of nutrients is accomplished by providing carcasses "whale falls" for deep-sea communities of cyanobacteria, while additional ecosystem benefits may accrue through active atmospheric carbon sequestration (Lavery et al 2010).

When this creature is fatally struck or killed... a crimson tide flows from its from its spirales... the sea, too, will be lashed by its mighty tail with a sound that may be heard in calm weather for miles like thunder

Polynesian 22 June 1850

