## MANILA GALLEONS

The round trip voyage of 20,000 nautical miles, the world's longest navigation route, was undertaken each year by the Manila Galleons (*naos* de la China) from 1565 to 1815. During this period of 250 years one or two ships completed the voyage annually between the port of Cavite in Manila, Philippines and the port of Acapulco on the west coast of Mexico. These arduous voyages were fraught with extreme danger, hardship and uncertainty.

Crossing the vast and unpredictable Pacific Ocean, the journey from Acapulco to Manila was around 9,000 miles, and from Manila to Acapulco about 11,000 miles. The galleons heading to the Philippines traveled more or less in a straight line equidistant between the Equator and the Tropic of Cancer, following the North Equatorial Current and Northeast Trade Winds south of Hawaii. The galleons heading to Mexico proceeded northeast and followed the Kuroshio current to the latitudes of Japan. They then followed the North-Pacific Current and westerly winds eastward past Guam and the Marianas to the north of Hawaii to California, and proceeded down the coast to Mexico.

The entire voyage from Acapulco to Manila, barring unforeseen delays or circumstances, took two and a half to three months. The galleons had to leave port during the Northeast monsoon in the northern Pacific, which prevailed from November to March, and they preferably departed by February. The much more demanding and longer voyage from Manila to Acapulco usually took from five to eight months, but sometimes extended up to even 12 months.

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Departures from Manila were during the Southwest monsoon in June or July (in 1620 the King of Spain decreed that the galleons should leave Manila by the last day of June), but sometimes even as late as August (Isorena, Efren B., 2015).

Acapulco was selected as the trading port of the Manila galleons in the Americas because of its excellent harbor, and its overland accessibility to Vera Cruz on the Caribbean side of Mexico. Goods arriving on the galleons from Manila were transported overland by mule train to present day Mexico City and then on to Veracruz on the Gulf of Mexico. In Veracruz the goods from the Orient were loaded on ships going to Spain that rendezvoused with other Spanish bound ships in Havana. These annual Treasure Fleets (*flotas*) across the Atlantic to Cadiz, Spain were made up of the ships from the Armada de Tierra Firma, which served South American trade routes out of Cartagena, Colombia, and of the Flota de Nueva España, which served the trade of Mexico and the Manila Galleons out of Vera Cruz.

Galleons arriving in the New World from Manila carried a cargo which consisted of a great variety of goods from various locations in the Orient. This included the following (source and goods indicated): China – considerable quantities of silk, damask, brocades and other textiles, porcelain, tea, furniture, clothing, bed coverings, tapestries, table linens, handkerchiefs, church vestments, combs (made variously of tortoise shell, ivory, gold), ivory, jade, ginger (a good source of vitamin C, but this was unknown in those times); Moluccas Islands and other islands in Indonesia – spices including pepper, cloves, cinnamon, nutmeg; India – cotton and cotton goods, gemstones, sandalwood, wood carvings; Japan – knives, swords, amber, laquerware; Burma, Ceylon and Siam - ebony, ivory, civet musk (natural perfume base from civet cat), rubies, sapphires, jewelry; Cambodia – ivory; Philippines – Manila cigars, copra (dried coconut), coconut shell and hemp products, hardwood, beeswax, jewelry; Borneo – camphor, gemstones. On the return voyage from Acapulco to Manila the galleons transported silver bullion, gold, minted coins, cacao, cochineal (dried insects used to produce red dye), oil, wines, Flemish laces, Spanish cloth and other goods. Availability of space also permitted the transport of various passengers including Royal officials with attendants and family, relatives of the ships' officers, foreign seamen, merchants, friars and missionaries, soldiers. The galleons were also used for forced transportation of deportees, prisoners, undesirables, and conscripts from Spain and her colonies. The size and capacity of the Manila Galleons increased over time from 300 to 700 tons carrying capacity to 1,100 to over 2,000 tons carrying capacity. The crews included variously Spaniards, Filipinos, Chinese and Mexicans. During the Manila Galleon voyages typically one-third or more of the three hundred to six hundred crew and passengers aboard died from scurvy, various other diseases and epidemics, thirst, hunger, or exposure. (References include Lyon, 1990)

These voyages represented the earliest linking of commerce between the East and West on a regular basis. It was really a monumental undertaking and supreme accomplishment considering the lack of technology, harsh conditions and other limitations of the times. In the present day, for example, a 747–400 Freighter (cargo version of the Boeing 747) would complete a round trip flight between Manila and Acapulco in about 36 hours carrying 125 tons of cargo each way. During the 250 year Manila Galleon era more than 400 voyages were made and a total of 59 galleons were lost for a variety of reasons, principally inclement weather, but also including human error, over loading, technical defects, navigation hazards, and nautical diseases (primarily scurvy). A total of 41 of the shipwrecks occurred within Philippine waters. Six galleons were lost in the vicinity of the Marianas Islands, and the San Agustin sank in 1595 off the west coast of the United States in Drakes Bay northwest of San Francisco. The Manila to Acapulco route, as the more arduous, lengthy and dangerous passage, registered a higher percentage of shipwrecks then the Acapulco to Manila return trip.

The collection of this writer includes a few ceramic shards salvaged from Spanish galleons; these consist of fragments of olive jars (*botijas*) and Chinese porcelain. The olive jar fragments include 0-016 and 0-017 from Nuestra Señora de Las Nieves of the 1715 Spanish Treasure Fleet, and 0-022 from San José y Las Animas of the 1733 Spanish Treasure Fleet (photos below). The Chinese porcelain shards consist of C-258 (4 shards) from Nuestra Señora de Las Nieves of the 1715 Spanish Treasure Fleet, and C-137 and C-147 from San José y Las Animas of the 1733 Spanish Treasure Fleet (photos below). Shards (4) from unspecified 1715 Fleet vessels are also included (photos below).

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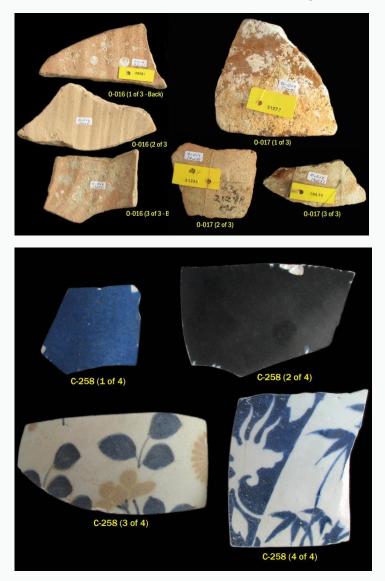
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Field Visit: Guam - November 1972.

Field Visit: Manila – December 1973 and March 2011.

Field Visit: Point Reyes and Drakes Bay, California (San Augustin 1595 wrecksite) – January 1996.

Nuestra Señora de Las Nieves of the 1715 Spanish Treasure Fleet





## San José y Las Animas of the 1733 Spanish Treasure Fleet





## Spanish Treasure Fleet - 1715 (Unspecified Vessels)

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